OMB Approval #: 2700-0042

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT CODE	PAGE OF PAGES	
12	1	5

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
65		See page 1a	

6. ISSUED BY	CODE	7. ADMINISTERED BY *(If other than Item 6)*	CODE
Procurement Office George C. Marshall Space Flight Center National Aeronautics and Space Administration Marshall Space Flight Center, AL 35812	PS33-MGD	MSFC Adm: 33-MGD/Lee Whalen 256-544-4805 lee.c.whalen@nasa.gov AUTOMATED INVOICE PAYMENT INFORMATION: (256) 544-5566	PS33

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State, and Zip Code)*	(x)	9A. AMENDMENT OF SOLICITATION NO.
Hernandez Engineering, Inc. 17625 El Camino Real #300 Houston TX 77058		9B. DATED *(SEE ITEM 11)*
	X	10A. MODIFICATION OF CONTRACT/ORDER NO. NAS8-00179
		10B. DATED *(SEE ITEM 13)* 10/01/00
CODE FACILITY CODE 2Y303		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*
see page 1a

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(x)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, THE "LIMITATION OF FUNDS" CLAUSE
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Changes clause, Limitation of Funds clause, the Fair Labor Standards Act and Service Contract Act-Price Adjustment clause
	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return **3** copies to the issuing office.

	Negotiated Estimated Cost	Potential Award Fee	Earned Metric Evaluation Fee	Earned Performance Evaluation fee	Contract Value	Total Sum Allotted
Previous	$ 47,104,690	$ 710,469	$811,213	$1,271,292	$49,897,664	$47,068,212
This Mod	**$ 9,189,622**	**$ 541,605**	$ 0.00	$ 0.00	**$ 9,731,227**	**$ 2,993,873**
New Total	**$56,294,312**	**$1,252,074**	$811,213	$1,271,292	**$59,628,891**	**$50,062,085**

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
Theresa C. Clark Business Manager	David A. Iosco Contracting Officer

15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY *(Signature of Contracting Officer)*	

BA /Commit Itm/WBS Element/Internal Order/Cost/Fund Ctr/Fund Amount

4200108456					
62 2550		FC400000	62SMAECLSS	62-SMA EXCX22005D	$ 771,000
62 2550		FC400000	62SMAISS	62-SMA EXCX22005D	$ 150,000
62 2550		FC400000	62SMAISP	62-SMA EXCX22005D	$ 68,000
62 2550		FC400000	62SMAISP	62-SMA EXCX22005D	$ 50,000
4200108929					
62 2550		FC400000	62GAS&MA	62-CTRGA EXCX22005D	$ 35,034
4200109115					
62 2550		FC400000	62MAMICRG	62-SMA ESAX22005D	$1,200,000
4200110083					
62 2550		FC400000	62QD03	62-104-07 EXCX22005D	$ 471,820
4200111518					
62 2550		FC400000	62QD03	62-103-06 ESAX22005D	$ 60,000
4200114532					
62 2550	62-617-02-01	F400000	62QD03	62-617 EXCX22005D	$ 35,000
4200114607					
62 2550	62-335-60-02-MS	FC400000	62QD03	62-335 EXCX22005D	$ 60,000
62 2550	62-335-60-02-MP	FC400000	62QD03	62-335 EXCX22005D	$ 50,000
4200116600					
62 2550		FC400000	62S&MA	62-CTRGA EXCX22005D	$ 35,034
4200116615					
62 2550	62-104-07-02	FC400000	62QD03	62-104-07 EXCX22005D	$ 7,985

Total **$ 2,993,873**

The purpose of this modification is to definitize the requirement for additional S&MA mission services by extending the contract period of performance for one additional year through September 30, 2006, at a negotiated increase in the estimated cost, potential award fee, and contract value of **$9,189,622, $541,605,** and **$9,731,227**, respectively. The potential award fee of **$541,605**, is split between potential performance evaluation fee of **$324,963**, and potential metrics evaluation fee of **$216,642**, respectively. Therefore, the contractor shall perform the work called for in the **revised section J**, Attachment J-1, Performance Work Statement (PWS), during the period of performance for the extension, which commences on **October 1, 2005** and continues through **September 30, 2006**. In addition, this contract is to extend the estimated funding coverage date from September 5, 2005 through **January 5, 2006** in accordance with the contractor's email message dated July 6, 2005. Furthermore, The DPD is re-issued for this extension period (See Attachment J-2). This modification incorporates Wage Determination No. 1994-2008, Revision No. 23, into the contract (See Attachment J-3). This wage determination takes effect on **October 1, 2005**. The negotiated composite direct labor rate set forth in the Metrics Evaluation Plan for the extension year is now (b)(4) As agreed upon during negotiations; A) two (2) HEI proposals still outstanding for 1) additional support to the ECLSS Project, proposal no. 088-0100504-TC and 2) additional Probabilistic Risk Assessment (PRA) Support to MSFC Shuttle Elements proposal no. 012-012005-TC are considered rescinded by HEI. B) Under the terms of the contract direct charging of routine office supplies at MSFC is authorized as allowable and allocable to the contract providing that duplicative charges do not exist within the on-site overhead rate.

Accordingly, the contract is changed in the following particulars and all changes are indicated in **BOLD or by vertical line in the right margin**.

1. Clause B.2 CONTRACT COST AND FEES paragraph (b) is deleted in its entirety and the following is substituted in lieu thereof:

"B.2 CONTRACT COST AND FEES

(b) A summary of the estimated cost and fees for the performance of work under this contract is as follows:

	Previous Amount	Adjusted this Mod	New Total
Estimated Cost	$47,104,690	**9,189,622**	**$ 56,294,312**
Potential Award Fee(s)	710,469	**541,605**	**1,252,074**
Potential Performance Eval Fee (60%)	426,281	**324,963**	**751,244**
Potential Metrics Eval. Fee (40%)	284,188	**216,642**	**500,830**
Earned Metric Eval. Fee	811,213	0	811,213
Total	$49,897,664	**$9,731,227**	**$ 59,628,891**

(c) Estimated cost and fees applicable to each option period are set forth below:

Option No.	Period Covered	Estimated Cost	Performance Evaluation Fee	Metrics Evaluation Fee	Total Option Value
1	10/01/01-09/30/02	$7,863,911	$ 280,979	$ 134,761	$ 8,279,651
2	10/01/02-09/30/03	9,185,356	330,555	224,867	9,740,778
3	10/01/03-09/30/04	11,922,423	437,803	291,870	12,652,096
4	10/01/04-09/30/05	11,608,672	426,281	284,188	12,319,141
Ext	**10/01/05-09/30/06**	**$9,189,622**	**$ 324,963**	**$ 216,642**	**$ 9,731,227**

(End of clause)"

2. Clause B.3 AWARD FEE FOR SERVICE CONTRACTS (1852.216.76)(MAR 1998), paragraphs (e)1. and 2. are hereby deleted in their entirety and the following is substituted in lieu thereof:

"B.3 AWARD FEE FOR SERVICE CONTRACTS (1852.216.76)(MAR 1998)

1. Summary of Potential and Earned Performance Evaluation Fee.

Award Fee Period	Original Amount Available	Performance Eval. Fee Earned	Mod No.
10/01/00 - 03/31/01	$ 117,545.00	$ 111,079.00	Mod 07
04/01/01 - 09/30/01	$ 122,030.00	$ 117,881.00	Mod 15
10/01/01 - 09/30/02	$ 288,776.00	$ 280,979.00	Mod 28
10/01/02 - 09/30/03*	$ 337,301.00	$ 330,555.00	Mod 45
10/01/03 - 09/30/04	$ 437,803.00	$ 430,798.00	Mod 58
10/01/04 - 09/30/05	$ 426,281.00		
10/01/05 - 09/30/06	**$ 324,963.00**		
Total	**$ 2,054,699.00**	$ 1,271,292.00	

Summary of Potential and Earned Metrics Evaluation Fee.

Period	Available	Eval. Fee Earned	Mod No.
10/01/00 - 03/31/01	$78,362.00	$ 78,362.00	Mod 07
04/01/01 - 09/30/01	$81,353.00	$ 81,353.00	Mod 15
10/01/01 - 09/30/02	$192,516.00	$ 134,761.00	Mod 28
10/01/02 - 09/30/03	$224,867.00	$ 224,867.00	Mod 45
10/01/03 - 09/30/04	$291,870.00	$ 291,870.00	Mod 58
10/01/04 - 09/30/05	$284,188.00		
10/01/05 - 09/30/06	**$216,642.00**		
Total	**$1,369,798.00**	$ 811,213.00	

(End of Clause)"

3. Clause B.5 CONTRACT FUNDING (1852.232-81) (JUN 1990) is hereby deleted in its entirety and the following is substituted in lieu thereof:

"**B.5 CONTRACT FUNDING (1852.232-81) (JUN 1990)**

(a) For the purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is **$46,727,506**. This allotment is for Safety and Mission Assurance (S&MA) Services and covers the following estimated period of performance: October 1, 2000, through **5 January 2006**.

(b) An additional amount of **$3,334,579** is obligated under this contract for payment of fee.

Recapitulation of funding is as follows:

	Previous	This Action	Total
Total Estimated Cost	$44,275,238	**$2,452,268**	**$46,727,506**
Provisional Award Fee	710,469	**541,605**	**1,252,074**
Earned Award Fee	2,082,505	0	2,082,505
Performance Eval Fee	1,271,292	0	1,271,292
Metrics Eval. Fee	811,213	0	811,213
Total Sum Allotted	$47,068,212	**$2,993,873**	**$50,062,085**

(End of clause)"

4. Clause F.2 PERIOD OF PERFORMANCE, paragraph (a) is deleted in its entirety and the following is substituted in lieu thereof:

"**Clause F.2 PERIOD OF PERFORMANCE**

a. The period of performance of this contract shall be from October 1, 2000, through **September 30, 2006."**

(End of clause)"

5. The Negotiated Composite Direct Labor Rate (CDLR) table set forth in Attachment J-4 Section B, METRICS EVALUATION PLAN (MEP), is hereby deleted in its entirety and the revised table, shown on Attachment J-4 (**replacement page J-4B-10**), is substituted in lieu thereof.

6. CONTRACTOR'S RELEASE STATEMENT

In consideration of the modification(s) agreed to herein as complete equitable adjustment for all claims arising out of or attributable to the issuance of the contract change(s) and/or contractor proposal(s) listed below, including all other subsequent proposal updates, the contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts or circumstances giving rise to said contract change(s) and/or contractor proposal(s), and for such additional obligations as may be required by this modification.

Contract Change Identification
Modification 65, One Year Extension of Contract No. NAS8-00179

Contract Proposal Number
HEI Proposal No.: 0175-020205 TH , dated February 15, 2005, as Modified March 09, 2005 via letter 0180-030705 TH.

(End of change order)

SAFETY AND MISSION ASSURANCE (S&MA) SERVICES

SECTION J

LIST OF ATTACHMENTS

ATTACHMENT J-1

PERFORMANCE WORK STATEMENT

1.0 MISSION

The MSFC Team has accepted the goal to seek to establish the Center as number one in safety within NASA. Commitment to the core values of the Center's people and customers allows for the establishment of a highly skilled, diverse, and motivated workforce committed to safety. Working in a creative and productive environment in support of cutting-edge systems and technology development, the Center employs unique and innovative management techniques to improve safety of the public, the astronauts and pilots, the NASA workforce and high-value equipment and property. The Safety and Mission Assurance Office is committed as a part of MSFC, to preventing human injury and occupational illnesses while developing and maintaining a world-class safety program. The S&MA Service Contractor shall fully support these endeavors and demonstrate the same type of commitment to a world-class safety program.

The Contractor shall provide the necessary management, personnel, equipment, and supplies (not otherwise provided by the Government) required to provide mission services associated with the planning, implementation, and assessment of safety, reliability, maintainability, quality assurance, and risk management programs for the Marshall Space Flight Center Safety and Mission Assurance Office. The mission services tasks associated with each of these programs are elaborated in this Performance Work Statement (PWS). See Appendix E for a list of the current MSFC Programs and Projects requiring Safety and Mission Assurance support.

The Contractor shall perform surveillance of assigned MSFC in-house and contracted design, manufacturing, and testing activities, for both hardware and software, to assess compliance with NASA MSFC Safety, Reliability, Maintainability, and Quality Assurance (SRM&QA) policies, requirements, and controls. The Contractor shall assure that management assessment information is provided in a timely manner to the MSFC S&MA Office to support the decision-making process regarding open problems, hazards, and risks pertaining to accomplishing MSFC's mission. This will include operation and maintenance of the S&MA Management Information Center (MIC).

The tasks described in this Performance Work Statement shall be performed principally in the MSFC locale; however, occasional travel to contractor facilities, NASA Headquarters, and other NASA installations may be required.

This Performance Work Statement as set forth is unclassified, and proposals should be submitted accordingly. However, some Contractor personnel may require access to classified documents; therefore, the selected Contractor must possess or be able to acquire a Facility Security Clearance. Security clearance, for those persons required to have such, will be obtained in accordance with the Industrial Security Manual for Safeguarding Classified Information, DOD Manual 5220.22. Contractor personnel working at MSFC must comply with pertinent MSFC security regulations.

The numbering system employed in this Performance Work Statement (PWS) corresponds to the numbering system employed in the Work Breakdown Structure (WBS) (Appendix D) that depicts this effort, however, in some sections, it is detailed to a lower level. Each PWS task describes the correspondingly numbered WBS item.

2.0 MANAGEMENT

The Contractor shall provide administrative and program management for effective direction and control of this contract. The Contractor's plan and approach for providing such management shall be documented in a Management Plan, which will be prepared in accordance with DRD 875MA-001. The Contractor shall develop management information systems, which provide a means for monitoring and measuring performance and which encompass planning, scheduling, progress, and completion of tasks or projects. A Monthly Financial Management Report shall be provided in accordance with DRD 875MA-002. Progress Reports shall be submitted in accordance with DRD 875MA-003. An On-Site Employee Location Listing shall be submitted in accordance with DRD 875CD-001.

2.1 Project Management

The Contractor shall provide planning, coordination, and surveillance of overall activities to assure disciplined performance of work and timely application of the resources necessary for completion of all tasks described in this Performance Work Statement.

2.2 Property Management

The Contractor shall comply with: MWI 4520.1 - Receiving, MWI 4220.1 - Office Furniture and Furnishings Services, MWI 4200.1 - Equipment Control, MWI 4300.1 - Disposal Turn Ins/Reutilization Screening, MWI 4500.1 - Supply Management: Storage and Issue, MWI 4520.2 - Use of the Procurement Discrepancy Tracking System (PDTS), MPR 4000.2 - Property Management, Part 45 of the Federal Acquisition Regulation, and Part 18-45 of the NASA Federal Acquisition Regulation Supplement for acquisition and accountability of materials and equipment. The Contractor shall implement an inventory control system for all non-capitalized property and equipment. A Government Property Management Plan shall be provided, maintained, and implemented in accordance with DRD 875LS-001.

2.3 Occupational Safety and Health

The Contractor shall be responsible for accomplishing the required industrial/occupational safety functions in compliance with the safety requirements contained in the safety documents referenced in DRD 875SA-001. The contractor shall establish and implement a safety, health, and environmental program that incorporates the following elements as applicable to work performed under the contract (documented in the On-site Safety and Health Plan in accordance with DRD 875SA-001).

a. Management commitment and employee involvement in the safety and health program.

1. Document worksite safety policy.

2. Establish and communicate clear safety and health goals.
3. Full management involvement in implementation of the safety and health program.
4. Full employee involvement in the safety and health program.
5. Assign and communicate responsibilities.
6. Provide authority and resources.
7. Provide or allow access to professional safety and health staff.
8. Hold accountable management and employees.
9. Conduct annual self-evaluation reviews.

b. System and worksite hazard analysis.
   1. Complete and update baseline surveys.
   2. Perform analysis of new work.
   3. Perform hazard analysis of all jobs [i.e., job hazard analysis (JHA)].
   4. Conduct safety and environmental inspections (i.e., at a minimum, one per supervisor per month).
   5. Establish and maintain a hazard reporting system (MSFC's Safety Concerns Reporting System (SCRS) may be used).
   6. Investigate all mishaps and "close calls," and correct hazards.
   7. Analyze all injury, illness, and "close calls" trend data.

c. Hazard prevention and control.
   1. Establish a hazard identification process and measurements.
   2. Conduct facility and equipment maintenance.
   3. Conduct emergency preparedness planning and training (On-site contractors may use MPD 1040.3).
   4. Establish emergency medical care program.

d. Safety and health training.
   1. Train employees to identify, understand, and prevent hazards, and certify employee qualifications to perform tasks when required by OSHA Code of Federal Regulations and MWI 3410.1.
   2. Train supervisors to control hazards.
   3. Train managers to understand safety, health and environmental issues.

e. Environmental compliance.
   1. Establish and maintain a process to procure green chemicals as required by Executive Order 13101, "Greening the Government through Waste Prevention, Recycling, and Federal Acquisition" for current hazardous substance usage.

2. Establish and maintain procedures for reducing, reusing, and recycling of hazardous and toxic substances prior to disposal as required by the Pollution Prevention Act.
3. Establish and maintain procedures for minimizing storm water pollution from entering the environment through inside storage, engineering controls, inspection, etc.
4. Establish and maintain procedures for ensuring that permits required by the Clean Air and Clean Water Acts are obtained for equipment and processes and that inspections, record keeping, and tests are performed.
5. Establish and maintain procedures for disposing of hazardous waste, controlled waste, and/or wastewater as allowed by MSFC permits.

Mishaps shall be reported to the MSFC S&MA Office in accordance with DRD 875SA-002, "Mishaps and Safety Statistics Reports."

2.4 Working Group Support, Information Exchange, and Support for Implementation of New or Revised Requirements

The Contractor shall provide the following for each of the SRM&QA functions:

a. Participation in working groups.

b. Information sharing or exchange with NASA Headquarters, other NASA Centers, and MSFC element contractors.

c. Review of and preparation of comments for drafts of new requirements documents or proposed revisions to existing requirements documents.

d. Participation in MSFC S&MA efforts to have MSFC Project Offices and their associated contractors implement new or revised requirements.

2.5 Personnel Training and Certification

Certification is required for personnel engaged in training responsibilities, processes and potentially hazardous operations during fabrication, assembly, and inspection, of flight or flight-associated hardware and buildup, and operations and maintenance of the test facilities. Personnel certification, re-certification shall be accomplished, maintained in accordance with the requirements of MWI 3410.1 "Personnel Certification Program," NPR 8715.3 "NASA Safety Manual"; and applicable codes for welding, inspection, and Nondestructive Evaluation (NDE) of structural and pressure pipe welding. A Personnel Training and Certification Plan shall be provided in accordance with DRD 875MA-009.

3.0 SYSTEMS SAFETY ENGINEERING PROGRAMS

3.1 Develop and utilize any tools needed to assure that all applicable system safety requirements (e.g., Agency, Center, Program/Project, etc.) are identified for MSFC programs and projects. These should include, but not be limited to fault tree analysis, logic trees, hazard analysis trending and data search, and any other systems needed to analyze system safety information. The results of these tools should be provided to MSFC S&MA personnel with appropriate recommendations.

3.2 Assess program or project documentation (e.g., Contractor PWS, Data Requirements Documents, System Requirements Document, Contract End Item (CEI), Requirements Verification Compliance (RVC), procedures, etc.) to assure that all applicable safety requirements are included.

3.3 For in-house designs perform and/or assess and for out-of-house designs assess trade studies relative to design, Operations, or mission events to assure compliance with safety requirements and to assure safety risks are adequately identified, characterized, and mitigated.

3.4 For in-house designs prepare and/or assess and for out-of-house designs assess Safety Plans to assure compliance with applicable Agency, Center and Program safety requirements. Assess Project Plans to assure that safety is properly considered.

3.5 For in-house designs perform and/or assess and for out-of-house designs assess hazard analyses to assure that: (a) all hazards are identified and the associated risks properly characterized; (b) hazard controls satisfy applicable safety requirements and adequately mitigate safety risks; (c) safety verification requirements are clearly identified and adequate, including the clear definition of verification pass/fail criteria; and (d) the safety verification status is properly maintained in a closed loop accounting system.

3.6 Assess program or project verification plans and verification requirements (e.g., Verification Plans, RVC documents, etc.) to assure safety verification requirements are properly included. Assess test and operating procedures to assure compliance with safety controls and safety verification requirements. Assess safety verification compliance data to assure it clearly demonstrates compliance with the safety verification requirements and parent safety requirement.

3.7 Participate in (including making presentations as required) milestone reviews, safety reviews and readiness reviews to assure compliance with applicable safety requirements. Evaluate documentation and data for technical interchange meetings, design milestone reviews (e.g., PRR, PDR, CDR, DCR), safety reviews, and readiness reviews (e.g., Pre-Ship Review, FRR, PAR) to assure compliance with applicable safety requirements and consideration of safety risks.

3.8 Assess proposed changes, deviations, and waivers to project documentation to assure compliance with safety requirements. Evaluate impacts to safety analyses, and effects on program or project risk.

3.9 Provide systems safety expertise for program and project Boards such as Configuration Control Boards, Problem Review Boards, Discipline Control Boards, Program Control Boards, etc.

3.10 Identify any adverse safety trends and promptly notify MSFC S&MA.

3.11 Provide real-time safety assessments during launch countdowns and missions.

3.12 Perform safety assessments of any issues, which involve one or more of the following:

a. Operation or performance outside the expected performance range of parameters or which has not previously been experienced.
b. Discrepancies or nonconformance which affect:
    1. Configuration
    2. Certification
    3. Mission success
    4. Safety critical functions
    5. Weight in excess of two pounds (equivalent performances to orbit)
c. Adverse problem trends
d. Discrepancies or nonconformance, which the operator determines, require design element analysis or assistance for resolution.
e. Unexplained anomalies or events.
f. Limit hardware life.
g. Restrict hardware or software use.
h. Affect hazard control.
i. Affect flight or ground operation procedures that are controlled by the Government.
j. Change software or hardware configurations that are controlled by the Government.
k. Allow use of hardware that does not meet performance specifications, exceeds certification limits, or surpasses time, age, cycle life limits (waivers/exceptions).
l. Affect critical hardware manufacture or repair processes.

3.13 Provide support to the Space Shuttle Systems Safety Review Panel (SSRP) such as documentation distribution and review, board establishment and communication, executive secretary function, meeting action item tracking, and records retention. Perform independent "Checklist Reviews" of Safety Compliance Data Packages.

3.14 Develop and maintain metrics regarding the safety performance of MSFC programs and projects.

4.0 INDUSTRIAL SAFETY PROGRAM

4.1 Conduct safety compliance and hazardous operations inspection of MSFC facilities including research and development test facilities, laboratories, and industrial facilities and equipment (machine shops and tools, welding and material handling equipment, boilers, and offices).

4.2 Conduct site safety compliance inspection of MSFC construction sites.

4.3 Perform safety-engineering evaluation of preliminary engineering reports, feasibility studies, and facility and equipment drawings and specifications to assure compliance with applicable codes and other MSFC safety program requirements.

4.4 Perform hazard analyses for ground-based activities in the MSFC locale when directed and evaluate ground safety analyses, including hazards analyses performed by others. Use state-of-the-art techniques such as safety checklists, fault tree analyses, and logic tree assessments to assure that hazards analyses are thorough and complete.

4.5 Evaluate test, checkout, and operating procedures for MSFC facilities and equipment to assure procedures will result in safe operations.

4.6 Evaluate written plans and procedures for program critical hardware (PCH) handling and transportation. Develop processes, perform engineering analysis for lifting equipment, and monitor implementation of, NASA Standard for Lifting Devices and Equipment (NASA-STD-8719.9) and participate in PCH moves as an expert advisor.

4.7 Support self-assessment of and survey all aspects of safety programs at MSFC including employee audits.

4.8 Provide required expertise/support for mishap investigations and other safety technical issues.

4.9 Participate as an expert advisor in Operational Readiness Inspections (ORI's) and Safety Review Teams to assess safety of test articles, facilities, interfaces, and test operations.

4.10 Identify and recommend improvements to the MSFC safety training program. Perform training duties for collateral duty employee training and employee general safety training on a continuing recurring basis. Execute proficiency tests for cranes, forklifts, aerial lifts, etc. for MSFC personnel.

4.11 Develop, utilize, and maintain any tools needed to assure that all applicable industrial safety requirements are identified for MSFC. These should include, but not be limited to; safety tracking systems, such as MSFC Hazardous Operations Personnel Certification (CERTRAK) (see paragraph 6.4), Construction Hazards, Employee Records of Unsafe Conditions (SCRS - Safety Concerns Reporting System), Facility Hazards (HAZTRAK), Safety Search, Mishap Reporting, Safety Bulletins, Hazard Analysis, Building Managers, ORI tracking systems, and Certified Cranes that meet the criteria for lifting PCH; and any other systems needed to track and analyze industrial safety information. The results of these tools should be provided to MSFC S&MA personnel with appropriate recommendations.

4.12 Perform safety engineering assessments of explosives siting problems using methods of the NASA Explosives Safety Standard. Methodology will include definition of maximum credible events, quantitative estimation of overpressure, fragmentation, thermal effects, and destructive potential at potential exposures, and preparation of risk assessment summaries.

4.13 Develop processes for, and monitor implementation of new NASA and OSHA safety standards and requirements.

4.14 Participate in pre-construction meetings to inform contractors of safety requirements at MSFC.

4.15 The Contractor shall provide Safety Engineer and Safety Specialist expertise in support of potentially hazardous operations at MSFC.

4.16 Provide expertise to help MSFC obtain and maintain certification in the OSHA Voluntary Protection Program or similar Third Party Assessment activities.

4.17 The Contractor shall prepare, present, and/or distribute information related to industrial safety activities as requested.

4.18 The Contractor shall provide administrative and technical writing support to the MSFC SHE Committee (DRD 875MA-005).

4.19 The contractor shall perform specialized assessments of facilities and the interfaces with test hardware supplied by NASA, Department of Defense, and commercial projects at Stennis Space Center (SSC). This will include performing Quantity Distance (QD) calculations and mapping, performing Independent Investigations leading up to Test Readiness Reviews, and providing expertise in safety risk assessment techniques such as Hazard Analysis, Failure Modes and Effects Analysis, Fault Tree Analysis, and Quantity Distance calculations.

The contractor shall perform a gap analysis of the Stennis Space Center (SSC) safety program compared to the requirements of a Voluntary Protection Program (VPP) safety program. Subsequently, the contractor will provide on-site expertise to guide SSC into a position to apply for VPP certification.

5.0 RELIABILITY AND MAINTAINABILITY ENGINEERING

5.1 Systems Analysis

5.1.1 Prepare reliability and maintainability plans for MSFC developed designs and evaluate reliability and maintainability plans submitted by contractors. Assure that reliability and maintainability requirements are consistent with MSFC S&MA and project management direction. Support the development of FMEA/CIL's and their ground rules for in-house designs and support the assessment of FMEA/CIL's and their ground rules for out-of-house designs.

5.1.2 Evaluate changes, out-of-family conditions, material reviews, and deviations for impact to FMEA's and CIL's.

5.1.3 Evaluate project documents related to reliability and maintainability to assure consistency and adequacy with overall project requirements.

5.1.4 Evaluate OMRSD's and implementing OMI's to assure that reliability and maintainability requirements are adequately addressed and implemented.

5.1.5 Participate in project milestone reviews (PRR's, PDR's, CDR's, DCR'S, FRR's, etc.) for the purpose of evaluating the incorporation of reliability and maintainability requirements throughout the life cycle of a project (e.g., design, production, testing, and operations).

5.1.6 Prepare reliability assessments, using reliability data bases, for each mission, vehicle, and other equipment in support of preflight assessment reviews and flight readiness milestone reviews.

5.1.7 Perform design trade studies, evaluate contractor prepared trade studies, and provide reliability and maintainability assessments.

5.1.8 Evaluate contractor provided reliability and maintainability analyses, to verify the validity of the analyses and that the analyses have been performed in accordance with requirements.

5.1.9 Perform ad hoc numerical reliability and maintainability analyses using appropriate analytical methods and models without necessarily receiving detailed technical guidance from MSFC. The analytical methods may include, but not be limited to, classical probability density functions, reliability and maintainability models, Monte Carlo simulation models, etc.

5.1.10 Develop and/or evaluate FMEA's and CIL's for compliance with requirements.

5.1.11 Develop and utilize any tools needed to assure that all applicable reliability and maintainability requirements are identified for MSFC programs and projects. These should include, but not be limited to FMEA/CIL information analysis, reliability trending and assessments, maintainability trending and assessments, and any other systems needed to analyze reliability and maintainability information. The results of these tools should be provided to MSFC S&MA personnel with appropriate recommendations.

5.2 Probabilistic Risk Assessment (PRA)

Prepare probabilistic risk assessment plans for MSFC managed programs and projects. Perform probabilistic risk assessments. Develop tools and techniques to assess probabilistic risk assessments. The contractor shall be able to perform PRAs as required on MSFC programs and projects. Specific tasking will include, but not be limited to reliability engineering tasks related to the Exploration Systems Mission Directorate programs and projects, and NASA Headquarters initiative to develop an overall Shuttle Program Risk Model. This will include data collection related to MSFC elements (Space Shuttle Main Engine, Solid Rocket Booster, Reusable Solid Rocket Motor, and External Tank), risk model selection and risk analysis of these elements, utilization of the selected risk model(s) to be integrated into the overall Shuttle Program Model, simulation of risk scenarios using available software packages, and an overall report on the data, methods/models, and results.

5.3 Hardware/Software Assessments

5.3.1 Evaluate in-house and contractor methods for identification and control of limited life items. Verify, through assessments, that

sufficient remaining life of equipment is available for accomplishing the mission objectives. Verify that life limits of common hardware are consistent.

5.3.2 Evaluate engineering and programmatic changes such as ECR's, ECP's, PCP's and SCN's for reliability and maintainability impact.

5.3.3 Evaluate in-house and contractor provided FMEA analyses of software design to assure software properly responds to critical failure modes as identified by the FMEA/CIL documents (i.e., fault detection, isolation, switching, etc.).

5.4 ALERT Program Maintenance

5.4.1 The Contractor shall receive ALERT's and shall enter them into the ALERT database.

5.4.2 The Contractor shall also distribute ALERTS to MSFC actionees for review and disposition, track the status of the reviews, enter the results of the reviews in the ALERT database, and transmit the results of the reviews to the organizations identified in MWI 1280.5. The ALERT database shall allow tracking the status of ALERT's by project as well as by ALERT actionee. The Contractor shall ensure that the ALERT data is available real-time to users.

5.4.3 Evaluate closure rationale of ALERTS.

5.5 Problem Assessment Center (PAC)

The Contractor shall operate the MSFC PAC in strict compliance with the MSFC PAC Operations Plan (see paragraph 5.5.1) and supplementary guidance provided by the COTR. In executing this task, the Contractor shall process incoming problem reports, coordinate the activities of the MSFC Problem Assessment System(PAS) (which provides the process by which MSFC project management and technical organizations review and close problem reports), provide official MSFC problem report data to authorized organizations and personnel, and operate and maintain (i.e., keep data current) the MSFC PRACA database.

5.5.1 Problem Assessment Center Operations Plan

The Contractor shall maintain and implement the Operations Plan for the MSFC PAC in accordance with DRD 875MA-006. The plan shall describe, in detail, the PAC activities necessary to fulfill the problem reporting requirements for each of the MSFC managed projects for which problem reporting is required.

5.5.2 Problem Report Processing

The Contractor will receive problem reports (i.e., initial reports, updates, and recommended closures) directly from hardware/software contractors via mail, courier, facsimile machine, or direct electronic transfer (i.e., the hardware/software contractor's computer furnishes problem report data directly to the MSFC PRACA database). The Contractor shall review the incoming problem reports for accuracy, clarity, and completeness. The Contractor shall complete the problem report data fields designated for completion by the PAC and the Design Center. For problem reports submitted by hardware/software

contractors who do not use the MSFC PRACA problem report format, the Contractor shall prepare an MSFC PRACA problem report form. The Contractor shall screen the incoming problem reports to identify system level problems (system level hardware is identified in Appendix B of document NSTS08126, Space Shuttle Problem Reporting and Corrective Action System Requirements). The Contractor shall maintain a complete record of each problem report submitted to the PAC.

5.5.3 Reviewing Problem Reports

The Contractor shall review the data for all coded fields as well as all text fields provided by the hardware/software contractor. This review shall address technical sufficiency as well as editorial acceptability. When a problem report is inaccurate, unclear, or incomplete, the Contractor shall contact the responsible hardware/software contractor by the most expeditious means and request correction, clarification, or supplementary information as warranted by the situation. Supplementary information may consist of backup technical data such as Engineering Change Request (ECR) documents, procedures, specifications, drawings, etc.

5.5.4 Problem Report Records

For each incoming problem report, the Contractor shall enter the required problem report data in the MSFC PRACA database unless that data is electronically transmitted directly to the MSFC PRACA database by the hardware/software contractor. The Contractor shall maintain a record of each problem report in the MSFC PRACA database. The Contractor shall also maintain a hardcopy file containing all problem reports and their associated backup information provided by the hardware/software contractor.

5.5.5 Coordinate the MSFC Problem Assessment System (PAS)

The Contractor shall coordinate the review and disposition of problem reports by the appropriate MSFC project management and technical assignees, record the actions of the assignees, and prepare and route non-concurrence letters when directed by the authorized assignees. The Contractor shall coordinate the MSFC review of system level problems and record the results of the review.

5.5.6 MSFC Review and Disposition

Upon receiving either initial problem reports or recommended closures from the hardware/software contractors, the Contractor shall expeditiously distribute copies of those problem reports, including backup information, to the appropriate assignees in the MSFC project offices, and the MSFC Safety and Mission Assurance Office. The Contractor shall be responsible for maintaining current knowledge of the identities of the assignees for each project for which the PAC processes problem reports. The Contractor shall track the status of the review and disposition of each problem report and, when requested, shall assist assignees in

obtaining additional information from hardware/software contractors.

5.5.7 Problem Review Board (PRB) Meetings

When a formal Problem Review Board (PRB) meeting is called, the Contractor shall prepare a proposed list of problem reports for review, schedule the meeting, prepare an agenda, and coordinate it with the hardware/software contractor, provide advanced notice to the participants, assure that the necessary support arrangements (i.e., meeting room reserved, telephone conference arranged, etc.) have been made, and provide problem report information packages to the MSFC assignees. In addition, the contractor shall provide an assessment of each problem report including related history, trends, thoroughness of report, and overall adequacy of investigation and recurrence controls. During the meeting, the Contractor shall administer the meeting, record and report status of action items assigned by the PRB, and record the PRB's disposition of the problem reports considered. Following the meeting, the Contractor shall monitor the status of action items, update the MSFC PRACA database and hardcopy files, and prepare, secure approval for, and distribute the minutes of the meeting.

5.5.8 MSFC Review of Space Shuttle System Level Problems

The Contractor shall monitor the Space Shuttle Level II Program Compliance Assurance Status System (PCASS) database to identify newly entered system level problems pertaining to the Orbiter. The Contractor shall provide these reports to the appropriate MSFC assignees and obtain their responses, which will be recorded in a dedicated file and provided to the appropriate JSC organization.

5.5.9 Official MSFC Problem Report Data

The Contractor shall provide official MSFC problem report data and, if requested, basic engineering assessments of the data or answers to questions regarding the data for the following:

a. Project office sponsored flight readiness reviews as well as S&MA Office sponsored readiness reviews (i.e., CoFR, preflight assessments (PFA), Preflight Assessment Reviews).

b. Daily electronic updates for the Level II PCASS problem report database.

c. Notification to the appropriate JSC organization of newly reported system level problems submitted by MSFC project hardware/software contractors.

d. Quarterly Open Problem Lists provided in fulfillment of the requirements of DRD 875MA-007.

e. Monthly Newly Opened/Closed Problem Report Summary in fulfillment of the requirements of DRD 875MA-008.

f. Requests from NASA MSFC Civil Service organizations.

g. Requests from the Huntsville Operations Support Center (HOSC) during mission support operations.

h. Requests from other organizations upon direction from the COTR.

5.5.10 Support for the Huntsville Operations Support Center (HOSC)

The Contractor will station assessment engineers at the Problem Assessment Center (PAC) during Flight Readiness Firings (FRF), Count Down Demonstration Tests (CDDT), and mission launches (beginning with tanking at approximately T-7 hours and continuing regularly or intermittently through completion of payload missions for which there are PAC maintained databases). At the PAC, the assessment engineers will respond to requests from the HOSC for problem information contained in the MSFC PRACA database. These requests will require extraction of problem data, structured queries of the database to produce information about groups of problems, and assessment and basic engineering analysis by assessment engineers to answer specific questions. The Contractor will notify the appropriate Program/Project S&MA representative if open problems are received which require disposition prior to launch. If necessary, the Contractor will support a PRB meeting as described in 5.5.7.

5.5.11 Problem Trending

The Contractor shall conduct ongoing statistical analyses and engineering assessments of problem trends. Problem trends may be prepared for any MSFC Project (Payloads, or Space Shuttle elements) if warranted. Resulting trend data/analysis is presented to the appropriate MSFC S&MA representative. Contractor format is acceptable.

5.6 PRACA (Problem Reporting and Corrective Action)

The Contractor shall prepare PRACA methodology documents for MSFC managed programs and projects and evaluate PRACA documents submitted by contractors. Assure that PRACA requirements are consistent with MSFC S&MA and project management direction.

6.0 QUALITY ASSURANCE

6.1 Systems

6.1.1 The Contractor shall prepare, evaluate and, provide assessments of in-house and contracted quality related contractual documentation (i.e., Hardware and Software Quality Assurance (QA) Plans) including implementation instructions and procedures for MSFC QA policies and directives.

6.1.2 The Contractor shall perform periodic reviews and assessments of in-house and contracted QA instructions for compliance with NASA policy, Safety and Mission Assurance (S&MA) Office Charter, and the MSFC Quality Management System.

6.1.3 The Contractor shall provide Quality Engineering (QE) expertise for the preparation, evaluation, and assessment of in-house and contractual documentation relative to processes (i.e., electrical,

electronic, materials, and non-destructive evaluation) encountered during the manufacturing, inspection, and test phases of projects.

6.1.4 The Contractor shall provide expertise to support the continued ISO 9000/AS9100 registration at MSFC including, but not limited to, training of MSFC employees on ISO 9000/AS9100, implementation plan maintenance, procedure preparation, progress monitoring, and internal audit support. The Contractor shall give advice/consultation on matters pertaining to interpretation of the ISO 9000/AS9100 standard (to individual organizations as well as the MSFC Management Representative and the Implementation/Maintenance team). The Contractor shall support the Center's ISO Implementation/Maintenance team. The Contractor shall assist in external and internal Audits/Surveillances and Corrective Action follow-up . The contractor shall participate in and support Document Control Panel/Board activity for review, evaluation, and disposition of S&MA controlled documents. This activity includes the review of Organizational Issuance (OI) and related external documents under review by Center Document Control Boards (DCB's).

6.1.5 The Contractor shall participate in MSFC program, contractor, supplier, or other Government milestone reviews (i.e., PAR's, PRR's, PDR's, CDR's, DCR's, FRR's, TRR's, etc.) to evaluate the incorporation of quality assurance and certification requirements in decisions affecting design, safety, production, testing, and operation.

6.1.6 Develop and utilize any tools needed to assure that all applicable quality assurance requirements are identified for MSFC programs and projects. These should include, but not be limited to quality information analysis (including workmanship standards, specifications, procedures and documentation quality control), quality data trending and assessments, as built configuration databases, and any other systems needed to analyze quality assurance information. The results of these tools should be provided to MSFC S&MA personnel with appropriate recommendations.

6.2 Process and Product Assurance

6.2.1 The Contractor shall prepare and evaluate workmanship standards, specifications, procedures, and control documentation for in-house and contracted processes and purchases, utilizing the Procurement Discrepancy Tracking System (PDTS) as appropriate, used throughout all phases of the hardware and software development cycle.

6.2.2 The Contractor shall prepare and evaluate in-house inspection criteria for safety critical hardware/software characteristics and other requested characteristics. They shall also evaluate and provide written assessments on other MSFC contractor or Government Agency inspection criteria and implementation of inspections.

6.2.3 The Contractor shall provide Engineering Change Proposal (ECP) support to S&MA Configuration Control Board (CCB) members. The support provided shall consist of logging, tracking, and distributing ECP's for S&MA review, response integration, and presenting the integrated assessments to CCB's. The Contractor shall also provide support as change package engineers (CPE) as assigned.

6.2.4 The Contractor shall provide the expertise to evaluate in-house and contractual waivers and deviations for compliance with stated QA, certification requirements, standards, and policies.

6.2.5 The Contractor shall provide QE expertise to ensure the inspect ability of in-house designs by performing drawing and procurement documentation review.

6.2.6 The Contractor shall provide the expertise to perform and evaluate trade studies relative to design, fabrication, inspection, testing, and operations.

6.2.7 The Contractor shall participate in the development and implementation of Quality training programs.

6.2.8 The Contractor shall prepare, evaluate, and maintain guidelines, checklists, and plans to be used in support of S&MA participation in audits of MSFC internal organizations, MSFC vendors and suppliers, and other Government Agencies and NASA Engineering and Quality Audits (NEQA). The Contractor shall maintain a status of all S&MA action items resulting from audits to ensure compliance with MSFC S&MA policies and procedures. The Contractor shall provide support to S&MA, auditors, and audited by assisting in scheduling audits, tracking and follow-up of findings, and preparation and distribution of final reports. The Contractor shall maintain a system for retention of quality records associated with audits.

6.2.9 The Contractor shall evaluate test results versus verification requirements including the disposition of test anomalies and discrepancies for adequacy. The Contractor shall maintain the necessary certification records, files, and hardware certification status to meet project and S&MA needs.

6.2.10 The Contractor shall provide Quality Assurance expertise in support of MSFC testing activities as required. The Contractor shall also provide Quality Assurance expertise in support of S&MA inspection activities.

6.3 Problem Analysis

6.3.1 The Contractor shall, as required, advise MRB members and recommend corrective action to improve product quality. The Contractor shall also participate in the construction of trending charts and analyses on MSFC contractor and in-house efforts, and shall provide recommendations to S&MA engineers and managers on adverse MSFC contractor and in-house trends.

6.3.2 The Contractor shall participate in problem and failure investigations to determine root cause and recommend corrective action.

6.3.3 The contractor shall administer the MSFC Corrective/Preventive Action System. It shall be operated in compliance with MWI 1280.3, Corrective/Preventive Action Notification System; MPR 1280.4, MSFC Corrective Action System; and attendant MSFC work instructions. The Contractor shall screen incoming potential recurrence control action requests (RCAR's); record and track problem and preventive action status; coordinate MSFC review and disposition of RCAR's; provide official MSFC report data to authorized organizations and personnel; perform trending on

related potential and screened RCAR's by failure mode and cause; and operate and maintain the MSFC CAS database. The Contractor will provide support for maintaining associated Safety and Mission Assurance (S&MA) organizational work instructions current with MSFC procedures and guidelines.

6.4 Personnel Certification Administration

The Contractor shall support the administration of the MSFC Personnel Certification Program in compliance with MWI 3410.1, Personnel Certification Program. The Contractor shall maintain a database system to record personnel certifications for MSFC and on-site contractor personnel. As required, the Contractor shall screen certification packages for compliance with procedures and coordinate the review of the packages with the applicable MSFC Certifying Officer.

6.5 Software Assurance (SA)

Support the establishment, implementation, and maintenance of applicable, NASA, Government approved Industry Standards, or DoD, SA requirements, and implementing these requirements on MSFC managed in-house and contracted software development programs. Support shall include, when applicable, the following. Preparing, evaluating, and providing assessments of MSFC managed in-house and contracted program/project SA Plans and software engineering change documentation (i.e. ECRs, ECPs, SPRs, TDRs, etc.). Evaluating and providing assessments of program/project software products (i.e. Software Development Plans, Software Requirements Specifications, Software Test Plans, etc.) and of applicable NASA/MSFC policies and guidelines (NPDs, NPGs, MPDs, MPGs, etc.). Participating in and providing assessment during program/project milestone reviews (i.e. PDR, CDR, TRR, etc.) Supporting audit planning and tracking of findings associated with the S&MA evaluation of MSFC managed software development process though SA internal audits (i.e. Software Development Folder Audits, Software Configuration Management Audits, Software Requirements Traceability Audits, Peer Review Audits, etc.) Performing software quality assurance test activities during the appropriate software development life cycle phase. Preparing and participating in SA related training. Supporting the collection of SA metrics. Preparing, evaluating, and providing assessment associated with the NASA Initiative for Software Assurance and with S&MA/SA documentation for the implementation of the SEI Capability Maturity Model Integration (CMMI) (i.e. SA OIs, etc.).

7.0 S&MA MANAGEMENT INFORMATION

7.1 The Contractor shall provide support for the management of all S&MA Management Information tools, including databases, applications, processes, hardware and software throughout the lifecycle, including planning, acquisition, development, documentation, operation and disposal. The Contractor shall also manage resulting S&MA data and provide a virtual focal point for the presentation of refined, integrated S&MA data and administer

the S&MA delegated agency data, including annual forecasts, midyear updates, and monthly data reduction.

7.2 Support the preparation and/or maintenance of S&MA management information documents including Organizational Issuances (OIs).

7.3 Using accepted and proven methodologies, assess S&MA's information needs for the present and future. Investigate alternatives for identified S&MA needs. Evaluate and recommend S&MA requirements for new system enhancements or capabilities. Present S&MA management with precise descriptions and recommendations on system alternatives and improvements.

7.4 Perform structured system design activities for in-house development work and for work performed by outside contractors, and make management recommendations to S&MA. MSFC S&MA will provide overview and retain final decision-making authority over all design and development activities. Assure conformance of all S&MA Management Information system development activities to governing policies and best practices.

7.5 The Contractor shall ensure that all system requirements are met. If not provided by S&MA, the contractor shall generate complete documentation for each system. This documentation shall include, but not be limited to, requirements definition, design definition, code documentation, user's guides for operations personnel as well as end users, implementation plans and operations plans. Assure that all internal reviews and on-site coordination activities are completed. Provide user support functions for S&MA Management Information including training and real-time help for supported programs and processes.

7.6 Provide computer security risk assessments of all S&MA databases and data applications in accordance with MPR 2810.1, "Security of Information Technology". Provide, review and revise information technology security plans per requirements. Coordinate information technology security-related initiatives for contract personnel.

8.0 PROJECT ASSURANCE SERVICES

Project Assurance Services shall be provided to all S&MA supported programs/projects.

8.1 S&MA Project Team Participation

8.1.1 Coordinate the Contractor S&MA activities with the S&MA project team leads to assure the proper execution of the S&MA project requirements.

8.1.2 Serve as expert advisor on SRM&QA topics for project team meetings, technical interchange meetings, problem investigation and resolution efforts, and other routine project meetings.

8.1.3 Participate in milestone reviews, data reviews, and safety reviews.

8.1.4 Provide assessments of flight readiness in support of the S&MA input to the PAR's and the Certificate of Flight Readiness for the MSFC Shuttle elements, MSFC Payloads, and Flight Projects. This includes, but is not limited to, technical issues resolution and

status of S&MA flight critical documentation (COQ's, FMEA/CIL, Hazards, etc.)

8.1.5 Track action items and issues resulting from above team meetings, milestone reviews and flight readiness activities, and recommend disposition to S&MA project team leader.

8.1.6 Participate in post flight assessment of the SRB and RSRM hardware at KSC and occasionally at the Thiokol RSRM Refurbishment Facility in Utah, as requested. Prepare assessment reports and presentations. Evaluate observations for determination of items that warrant formal problem reports.

8.2 S&MA Readiness Review Center

Operate the MSFC S&MA Readiness Review Center for each S&MA Readiness Review (SMARR), SMARR Tag-up and L-2 SMARR Tag-up including dry runs for ET/SRB Mate Reviews and Orbiter Rollout Reviews. This task includes scheduling, data collection, preparation and distribution of MSFC S&MA presentation materials, and data exchange with JSC, KSC, and NASA HQ. In addition, serves as a member of the NASA PAR Data Coordinators Working Group.

8.3 Special Studies

Perform studies/tasks that require inputs from different projects/disciplines. Work to be performed will be specifically defined by means of technical directives issued by the Contracting Officer.

Upon receipt of a technical directive, the Contractor shall submit within 10 calendar days a proposed plan for accomplishing the study/task to the Contracting Officer for approval. Other required documentation shall be prepared and evaluated as specified in the technical directive. In the event of any exception with the provisions of the technical directive, the Contractor shall follow the procedure outlined in Section G of this contract.

8.4 NASA Engineering and Safety Center (NESC) and Independent Technical Authority (ITA) Support

The Contractor shall provide as required the necessary administrative and technical support to S&MA to assure disciplined performance of work and timely application of the resources necessary for completion of all their assigned NESC and ITA tasks. NESC/ITA tasks will include, but are not limited to the following:

a. Developing and maintaining the MSFC S&MA NESC Significant Problem Reports

b. Supporting NESC trending activities

c. Supporting the NESC/ITA telecoms and meetings (including preparing supporting materials)

d. Providing technical support to NESC assessments and ITA warrant holders.

9.0 INDEPENDENT ASSURANCE TASKS

Use senior staff to perform independent assurance tasks in support of Independent Assurance (IA). Assessments will be requested by the MSFC S&MA Organization. IA tasks will include, but are not limited to the following:

a. Track Project/Program operations and make recommendations of potential IA topics to S&MA.

b. Develop and maintain IA assessment work plans.

c. Perform assessments in accordance with approved assessment plans. Coordinate with appropriate IA team members, other organizations conducting related assessments, and program/project offices while researching issues. Report significant issues or concerns developed by the assessment immediately to the MSFC IA Manager.

d. Develop report of analysis, observations and recommendations. This will include incorporation of any Program/Project responses to the IA observations. Present this report to the MSFC IA Manager for approval.

e. Brief observations to MSFC IA Manager, appropriate S&MA Managers and appropriate Program/Project personnel.

f. Coordinate and perform follow-up on closure of report observations and any assigned actions.

Performance of all tasking will be in accordance with OI QD-PA-006, MSFC S&MA IA Implementation Plan and MSFC Safety & Mission Assurance Directorate Independent Assessment of NASA Programs and Projects Plan.

10.0 RISK MANAGEMENT

10.1 The Contractor shall provide expertise to support the preparation, evaluation, and assessment of in-house and contractual program and project risk management plans. This expertise may require the Contractor to develop tools and techniques to facilitate the identification/tracking/mitigation of risks and issues that may potentially negatively impact a project or program.

10.2 The Contractor shall provide recommendations and advice to S&MA engineers and managers relative to risk mitigation actions to minimize or eliminate risks.

10.3 The Contractor's risk management experts shall take the NASA HQ supplied training and become certified as Continuous Risk Management Course instructors. Once certified, the instructors

shall present the two-day Continuous Risk Management Course in-house to MSFC employees (planned a minimum six times a year).

11.0 DOCUMENTATION AND REPORT SUPPORT

11.1 The contractor shall provide support in the development of plans, procedures, briefing material and other documents required in accomplishment of SRM&QA activities in accordance with DRD 875MA-005.

11.2 The contractor shall provide support to the S&MA offices with evaluations and assessments of documentation to accomplish its mission in support of MSFC Programs and Projects. These reports shall be in accordance with DRD 875MA-004.

APPENDIX A

ACRONYMNS

ABCSS - As-Built Configuration Status System

ALERT - Acute Launch Emergency Reliability Tip (NASA version of the GIDEP report)

CAS - Corrective Action System

CCB - Configuration Control Board (also Change Control Board)

CDDT - Count Down Demonstration Test

CDR - Critical Design Review

CEI - Contract End Item

CERTRACK - Certification Tracking System

CIL - Critical Items List

CMA - Center for Mishap Abatement

CO - Contracting Officer

CoFR - Certificate of Flight Readiness

COTR - Contracting Officer's Technical Representative

CPE - Change Package Engineers

DCARS - Defense Contracts Administration Reimbursable System

DCMC - Defense Contracts Management Command

DCR - Design Certification Review

DCB - Document Control Board

DRD - Data Requirement Description

ECP - Engineering Change Proposal

ECR - Engineering Change Request

ET - External Tank

FMEA - Failure Mode and Effects Analysis

FRF - Flight Readiness Firing

FRR - Flight Readiness Review

GIDEP - Government Industry Data Exchange Program

HEDS - Human Exploration and Development of Space

HQ - Headquarters

HOSC - Huntsville Operations Support Center

IA - Independent Assurance

JSC - Johnson Space Center

KSC - Kennedy Space Center

LTIR - Lost Time Incident Rate (as defined by OSHA)

MIC - Management Information Center

MPR - Marshall Procedural Requirements

MRB - Material Review Board

MSFC - Marshall Space Flight Center

MR/CAS - Mishaps Reporting/Corrective Action System

MWI - Marshall Work Instruction

NCR - Nonconformance Report

NDE - Nondestructive Evaluation

NEQA - NASA Engineering and Quality Audits

NPG - NASA Procedures and Guidelines

NSTL - Nonsupervisory Team Lead

OCIO - Organization's Chief Information Officer

OI - Organization Instruction

OMI - Operations and Maintenance Instruction

OMRSD - Operations and Maintenance Requirements Specification Document

ORI - Operational Readiness Inspection

OSHA - Occupational Safety and Health Act

OSMC - Organizational Storage Media Custodian

PAC - Problem Assessment Center

PAR - Preflight Assessment Review

PAS - Problem Assessment System

PCASS - Program Compliance Assurance Status System

PCH - Program Critical Hardware

PCP - Program Change Proposal

PDR - Preliminary Design Review

PFA - Preflight Assessment

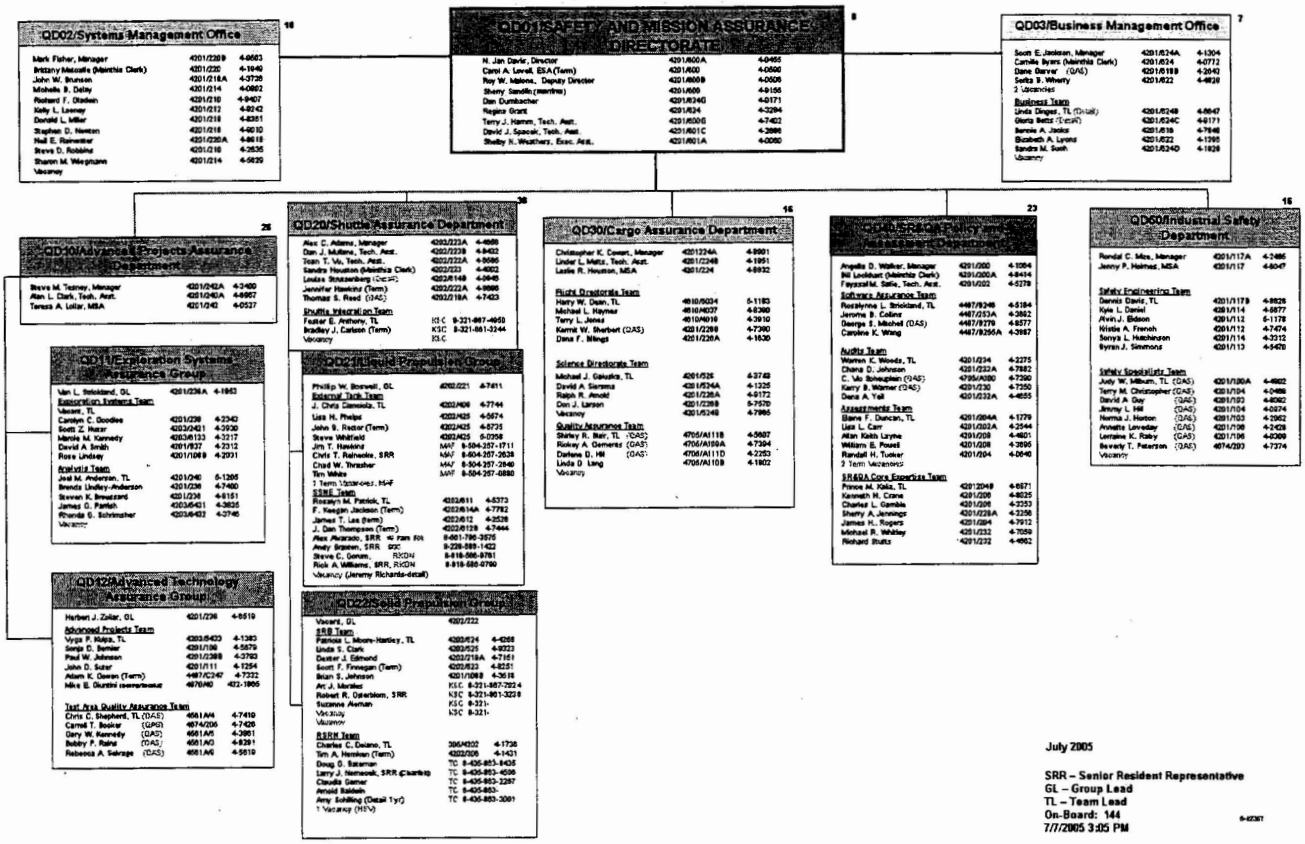
POC	-	Point of Contact
PRA	-	Probabilistic Risk Assessment
PRACA	-	Problem Reporting and Corrective Action
PRB	-	Problem Review Board
PRISMS	-	Program Information System Mission Services
PRR	-	Preliminary Requirements Review
PSRRB	-	Payload Safety Readiness Review Board
PWS	-	Performance Work Statement
QA	-	Quality Assurance
QE	-	Quality Engineering
QSDN	-	Quality System Deficiency Notice
QualComm	-	Quality Comment System
RCAR	-	Recurrence Control Action Request
RSRM	-	Reusable Solid Rocket Motor
RVC	-	Requirements Verification Compliance
SCN	-	Specification Change Notice
SCRS	-	Safety Concerns Reporting System
SRB	-	Solid Rocket Booster
SSP	-	Space Shuttle Program
SSRP	-	System Safety Review Panel
SRM	-	Solid Rocket Motor
S&MA	-	Safety and Mission Assurance (an MSFC organization)
SRM&QA	-	Safety, Reliability, Maintainability And Quality Assurance (indicates function/discipline and not an organization entity)
TRR	-	Test Readiness Review
UPRACA	-	UNIX Problem Reporting and Corrective Action
WBS	-	Work Breakdown Structure

APPENDIX B

MARSHALL SPACE FLIGHT CENTER
AFETY & MISSION ASSURANCE DIRECTORATE

ORGANIZATIONAL CHART

J.



APPENDIX C

APPLICABLE REGULATIONS, PROCEDURES, AND DOCUMENTS

The documents listed herein contain specifications to which the work must conform. The contractor shall comply with the requirements of these documents and all revisions thereto.

As a Services Contract, the contractor shall utilize all NASA and MSFC Directives and Standards as applicable, as well as Safety and Mission Assurance Organizational Issuance(s) (OIs). S&MA OIs may be found at the following URL: http://starbase.msfc.nasa.gov/directives/directives.htm . Current versions shall be utilized, unless authorization to use obsolete versions has been properly documented.

The following documents are applicable as stated in the Performance Work Statement and Data Procurement Document (875).

Executive Order 13101	*Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*
FAR	*Federal Acquisition Regulation, Part 45*
Federal Standard No. 313	
NPR 5100.4	*Federal Acquisition Regulation Supplement, (NASA/FAR Supplement) Part 18-45 and* latest revisions thereto
NFS 1852.208-81	*Restrictions on Printing and Duplicating. Printing*
NFS 1852.223-70	*Safety and Health.*
NFS 1852.245-71	Installation-Accountable Government Property
29 CFR 1910	*Department of Labor; Occupational Safety and Health Standards*
29 CFR 1926	*Department of Labor; Occupational Safety and Health Administration Standards for Construction Industry*
40 CFR	*Protection of the Environment* *ASME Boiler and Pressure Vessel Code*
OMB CIRCULARS	
Circular A-130	Management of Federal Resources
NASA DOCUMENTATION	
NPR 1490.5	*NASA Procedural Guidance for Printing, Duplicating, and Copying Management*
NPG 1620.1	Security Procedures and Guidelines
NPR 8715.3	*NASA Safety Manual*

NASA-STD-8719.9	*Standard for Lifting Devices and Equipment*
NASA-STD-8719.11	*Safety Standard for Fire Protection*
NPR 4100.1	*NASA Materials Inventory Management Manual*
NPR 4200.1	*NASA Equipment Management Manual*
NPR 8621.1	*NASA Procedural Requirements for Mishap Reporting, Investigating, and Record keeping*
NPR 9501.2	*NASA Contractor Financial Management Reporting*

MSFC DOCUMENTATION

MPD 1040.3	*MSFC Emergency Plan*
MPD 1280.4	*MSFC Corrective Action System*
MWI 1280.3	*Corrective/Preventive Action Notification System*

MPR 1440.2 MSFC Records Management Program

MPR 1600.1	MSFC Security Procedural Requirements
MPR 1800.1	*Blood Borne Pathogens*
MPR 1810.1	*MSFC Occupational Medicine*
MPR 1840.1	*MSFC Confined Space Entries*
MPR 1840.2	*MSFC Hazard Communication Program*
MPR 1840.3	*MSFC Hazardous Chemicals in Laboratories Protection Program*
MPR 2500.1	*Marshall Telecommunications Services*
MPR 2810.1	*Security of Information Technology*
MPR 3410.1	*Training*
MPR 8715.1	*Marshall Safety, Health and Environmental (SHE) Program*
MPD 1840.1	*MSFC Environmental Health Program*
MPD 1840.2	*MSFC Hearing Conservation Program*
MPD 1840.3	*MSFC Respiratory Protection Program*
MPD 1860.1	*Laser Safety*
MPD 1860.2	*Radiation Safety Program*
MPD 2210.1	*Documentation Input and Output of the MSFC Documentation Repository*
MPD 8900.1	*Medical Operations Responsibilities for Human Space Flight Programs*

MWI 1280.5	*MSFC ALERT Processing*
MWI 2210.1	*MSFC Documentation Repository Input/Output and Data Management Project Requests*
MWI 3410.1	*Personnel Certification Program*
MWI 4520.1	*Receiving*
MWI 4220.1	*Space Utilization, Communications, Furniture, Relocation, and Special Event Services*
MWI 4200.1	*Equipment Control*
MWI 4300.1	*Disposal Turn Ins/Reutilization Screening*
MWI 4500.1 MWI 4520.2	*Program Stock, Storage, and Retail Store Operations* *Use of the Procurement Discrepancy Tracking System (PDTS)*
MPR 4000.2	*Property Management*
MWI 5116.1	*Evaluation of Contractor Performance Under Contracts with Award Fee Provisions*
MWI 8621.1	*Close Call and Mishap Reporting and Investigation Program*
MPR 6700.1	Motor Vehicle and Motor Pool Operations
MPR 8500.1	MSFC Environmental Management

ANSI STANDARDS applicable to the scope of this contract

ANSI B31.1	*Code for Power Piping*
ANSI B31.3	*Code for Chemical Plant and Refinery Piping*
ANSI/AWS D1.1	*Structural Welding Code/Steel*
ANSI/AWS D1.2	*Structural Welding Code/Aluminum*
NFPA STANDARDS	*National Electrical Code* and *National Fire Code*

MISCELLANEOUS POLICIES AND PROCEDURES

NSTS 08126,	*Space Shuttle Problem Reporting and Corrective Action System Requirements*
SSP 30223	*International Space Station Program Problem Reporting and Corrective Action System Requirements*
JSC 27456	Human Exploration and Development of Space (HEDS) Independent Assessment Implementation Plan

MSFC Smoking Policy at http://www.msfc.nasa.gov/msfccwa/personel/smoke.html

APPENDIX D

WORK BREAKDOWN STRUCTURE

1.0 MISSION

2.0 MANAGEMENT

2.1 Project Management

2.2 Property Management

2.3 Occupational Safety and Health
2.4 Working Group Support, Etc.
2.5 Personnel Training and Certification

3.0 SYSTEMS SAFETY ENGINEERING PROGRAM

4.0 INDUSTRIAL SAFETY

5.0. RELIABILITY AND MAINTAINABILITY ENGINEERING

5.1 Systems Analysis
5.2 Probabilistic Risk Assessment
5.3 Hardware/Software Assessments
5.4 ALERT Program Maintenance
5.5 Problem Assessment Center
5.6 PRACA (Problem Reporting and Corrective Action)

6.0 QUALITY ASSURANCE

6.1 Systems
6.2 Process and Product Assurance
6.3 Problem Analysis
6.4 Personnel Certification Administration

7.0. S&MA MANAGEMENT INFORMATION

8.0 PROJECT ASSURANCE SERVICES

8.1 S&MA Project Team Participation
8.2 S&MA Prelaunch Assessment
8.3 Special Studies
8.4 NASA Engineering and Safety Center (NESC) and Independent Technical Authority (ITA) Support

9.0 INDEPENDENT ASSURANCE TASKS

10.0 RISK MANAGEMENT

11.0 DOCUMENTATION AND REPORT SUPPORT

Appendix E

Current List of MSFC Programs and Projects Requiring S&MA Support

Crew Exploration Vehicle (CEV)
Solar-Terrestrial Energy Program (STEP/Air SEDS)
Prometheus
Demonstration for Autonomous Rendezvous Technology (DART)
Orbital Express
ISFR-FAB (In-situ technologies - free form fabrication technologies)
ISFR-HAB In-situ fabrication and repair habitat structures technologies -)
ISFR-Repair (In-situ repair technologies)
RAD-Radiation Shielding
LOCAD -lab on a chip application development
NGLT projects - Auxiliary Propulsion Project, IPD, PT&I
Exploration Taskers
Space Shuttle Main Engine (SSME)
Solid Rocket Booster (SRB)
Reusable Solid Rocket Motor (RSRM)
External Tank (ET)
Propulsion Systems Engineering & Integration (PAE&I) S&MA
Space Shuttle Return To Flight (RTF)
Reinforced Carbon-Carbon on-Orbit Repair (RCC OR)
External Tank (ET) Excitation Power Box EPB
NASA Engineering and Safety Center (NESC) Trending Analysis
Biotechnology Carriers Single-Locker Thermal Enclosure System (BiC STES)
Biotechnology Carriers Thermal Energy Storage (BiC TES)
Biotechnology Carriers Diffusion-Controlled Crystallization Apparatus for Microgravity (BiC DCAM)
Biotechnology Carriers Protein Crystallization Apparatus for Microgravity (Bic PCAM)
Biotechnology Carriers Second Generation Vapor Diffusion Apparatus (BiC VDA-II)
Delta-L
Enhanced GN2 Dewar (EGN)
Mechanics of Granular Materials (MGM)
Observable Protein Crystal Growth Apparatus (OPCGA)
Protein Crystal Growth (PCG)
Crystallization of Oxide Melts in Space (CROMIS)
Microgravity Science Research Rack Experiment Carrier (MSRR-1-EC)
Microgravity Science Research Rack Quench Module Insert (MSRR-1-QMI)
PERSONAL Poor Formation and Mobility Investigation (PERSONAL PFMI)
Sample Ampoule Cartridge Assembly (SACA)
Spaceflight Holography Investigation in a Virtual Apparatus (SHIVA)
Solidification Using a Baffle in Sealed Ampoules (SUBSA)
Gravitational Effects on Distortion in Sintering (GEDS)
Frontal Polymerization in Microgravity (experiment) (FPM)
Microgravity Science Research Rack Payload Equipment Restraint System (MSRR-1-PERs)
Materials Science Research Facility (MSRF)
Glovebox Integrated Microgravity Isolation Technology (g-LIMIT)
Microgravity Science Glovebox (MSG)
MSG-I
GLAST Burst Monitor (GBM)
SOLAR-B

SXI
Node 2 Space Station Modules (SSM)
Node 3 Space Station Modules (SSM)
Node 3 Environmental Control and Life Support System (Subsystem) Oxygen Generation System ECLSS-OGS (SSM)
Node 3 Environmental Control and Life Support System (Subsystem) Water Recovery Systems (ECLSS-WRS) (SSM)
Multi-Purpose Logistics Module (MPLM)
Biological Research Program (BRP)
EXPRESS Rack
Portable Fan Assembly (PFA)
ISS Payload Integration Contract (IPIC)
Marshall Management System (MMS) Corrective Action Systems (CAS)
MMS/ISO 9000

DATA PROCUREMENT DOC. NO.	ISSUE
875	Basic

NAS8-00179

CONTRACT/RFP

EXHIBIT NUMBER

J-2

ATTACHMENT NUMBER

Safety and Mission Assurance Mission Services

PROJECT/SYSTEM

DATA PROCUREMENT DOCUMENT

CONTRACTOR

February 1, 2005

DATE

National Aeronautics and
Space Administration

MSFC - Form 3461 (Rev September 1989)
Word 6 Form

National Aeronautics and Space Administration

DOCUMENT CHANGE LOG

DATA PROCUREMENT DOC. NO. 875 Basic ISSUE

☒ INCORPORATED REVISIONS
☐ OUTSTANDING REVISIONS

AS OF:

SUPERSEDING:

PAGE:

AUTHORITY	PORTION AFFECTED - PAGE NO./NO.				REMARKS
	INTRO	SGR	DRL	DRD	

MSFC - Form 3461-1 (Rev August 1970) Word 6 Form

National Aeronautics and Space Administration **PAGE REVISION LOG**		DATA PROCUREMENT DOC. NO. ISSUE **875 Basic**	
NOTE: The current revision is denoted by a vertical line in the outer margin adjacent to the affected text.	AS OF:	SUPERSEDING: .	PAGE:

INSERT LATEST REVISED PAGES.			DISCARD SUPERSEDED PAGES.		
ITEM	PAGE	STATUS	ITEM	PAGE	STATUS

MSFC - Form 3461-2 (Rev August 1970)
Word 6 Form

STATEMENT OF GENERAL REQUIREMENTS

The contractor shall submit reports pursuant to the requirements of the attached Data Requirements List (DRL) and Data Requirements Descriptions (DRD's), which define the minimum contractor information required. The contractor shall also submit other special and non-recurring reports as may be required by the NASA Contracting Officer or his representative. Unless otherwise specified, all reports shall be addressed to the NASA Marshall Space Flight Center, Alabama, 35812. It is the intent to hold the cost of satisfying these requirements to a minimum. Insofar as practicable, the contractor's internal documents shall not be rewritten for the sake of meeting the minimum requirements as specified in the applicable DRL. In instances where minor differences in content and format exist between DRD requirements and contractor's document, action will be taken to resolve these differences and, where appropriate, a change in requirements will be effected. All documentation requirements shall be continually reviewed throughout the life of the contract to assure that each requirement is essential. Documents no longer needed shall be proposed to or by NASA for deletion.

NASA reserves the right to reasonably defer the dates of the delivery of any or all data required to be submitted. Such right may be exercised at no increase in the contract amount. The Government also reserves the right to terminate the requirement for any or all line items of data specified.

To the extent that data required to be furnished by other provisions of the contract are also identified and described in the DRL, compliance with the DRL shall be accepted as compliance with such other provisions.

Nothing contained in this data requirements provision shall relieve the contractor from furnishing data called for by, or under authority of, other provisions of the contract, which are not identified and described herein.

Electronic submission of data deliveries is preferred, except as noted in DRD's. The preferred format for electronic data is PC compatible Microsoft Word and Excel. E-mail addresses shall be provided at contract award.

When changes to original distribution requirements are required by the Contracting Agency, the contractor shall act upon such changes to the distribution of the data requirements, provided such changes do not incur additional costs. In the event that additional cost is involved, an equitable adjustment shall be negotiated.

For the purpose of classification and control, DRD's are grouped into the following broad functional data categories:

CATEGORY SYMBOL	DESCRIPTION
CD	Contractual Data
LS	Logistics
MA	Management
SA	Safety

The symbols representing these data categories form part of the prefix of the DRD identification number. The first numerical characters reflect the control number for this particular activity.

Printing: All printing, duplicating, or binding shall be in accordance with NFS 1852.208-81, Restrictions on Printing and Duplicating. Printing of formal reports and Type 1 and 2 data in book format shall be in accordance with the following general specifications:

a. Method of reproduction - offset/xerography.
b. Finished size - 8 1/2" X 11".

c. Paper - 20-pound opaque bond.
d. Cover - Litho cover stock.
e. Pages will be printed on both sides; blank pages will be avoided when possible.
f. Oversize pages will be avoided when possible, but if necessary will be folded to 8 1/2" X 11".
g. Binding shall be the most economical method commensurate with the size of the report and its intended use.

Data Types for Contractual Efforts: The types of data and their contractually applicable requirements for approval and delivery are:

TYPE	DESCRIPTION
1	All issues and interim changes to those issues requires written approval from the requiring organization before formal release for use or implementation.
2	MSFC reserves a time-limited right to disapprove in writing any issues and interim changes to those issues. Data shall be submitted to the procuring activity for review not less than 45 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not been notified of any disapproval prior to the release target date, the data shall be considered approved. To be an acceptable delivery, disapproved data shall be revised to remove causes for the disapproval before its release.
3	These data shall be delivered by the contractor as required by the contract and do not require MSFC approval. However, to be a satisfactory delivery, the data must satisfy all applicable contractual requirements.
4	These data are produced or used during performance of the contract and are retained by the contractor. They shall be delivered when MSFC requests it according to instructions in the request.
5	These data are incidental to contract performance and are retained by the contractor in those cases where contracting parties have agreed that delivery is not required. However, the Contracting Officer or the Contracting Officer's Representative shall have access to and can inspect this data at its location in the contractor's or subcontractor's facilities.

SAFETY AND MISSION ASSURANCE MISSION SERVICES
DATA REQUIREMENTS LIST

DRD	DATA TYPE	TITLE	OPR
CD-Contractual Data			
875CD-001	3	On-Site Employee Location Listing	PS33
875CD-002	2	Security Plans for Major Applications and General Support Systems	AD33
LS-Logistics			
875LS-001	1	Government Property Management Plan	PS10
MA - Management			
875MA-001	1	Management Plan	QD01
875MA-002	3	Financial Management Report	RS61
875MA-003	3	Progress Reports	QD01
875MA-004	2	Evaluation and Assessment Report	QD01
875MA-005	2	MSFC SRM&QA Documents	QD01
875MA-006	2	Operations Plan, Problem Assessment Center (PAC)	QD01
875MA-007	3	Quarterly Open Problems List	QD01
875MA-008	2	Monthly Newly Opened/Closed Problem Summary	QD01
875MA-009	1	Personnel Training and Certification Plan	QD01
SA - Safety			
875SA-001	2	On-site Safety and Health Plan	AD02/QD50
875SA-002	1	Mishap and Safety Statistics Reports	QD50

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875CD-001**
3. **DATA TYPE:** 3 4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** On-Site Employee Location Listing

7. **DESCRIPTION/USE:** To assist NASA in conducting contractor floor checks.

8. **OPR:** PS33 9. **DM:** QD01

10. **DISTRIBUTION:** QD01 (1), PS33 (1)

11. **INITIAL SUBMISSION:** Fifteenth of month following first month of operation after Authority to Proceed (ATP)

12. **SUBMISSION FREQUENCY:** Update quarterly. If deemed necessary by the Contracting Officer, the contractor shall submit the list at times other than stated.

13. **REMARKS:** Reference is made to FAR 52.215-2, *Federal Acquisition Regulation* Clause: Audit - Negotiation.
14. **INTERRELATIONSHIP:** PWS paragraph 2.0

15. **DATA PREPARATION INFORMATION:**
15.1 **SCOPE:** The On-Site Employee Location Listing shall provide NASA with a list of all on-site contractor employees working under this contract and their designated locations.

15.2 **APPLICABLE DOCUMENTS:** None

15.3 **CONTENTS:** The list shall include the following information for each employee: employee's name, position, location (building/room number), shift assignment, supervisor's name, and supervisor's location (building/room number).

15.4 **FORMAT:** Contractor format is acceptable.

15.5 **MAINTENANCE:** None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875CD-002**
3. **DATA TYPE:** 2 4. **DATE REVISED:**
5. **PAGE:** 1/1

6. **TITLE:** Security Plans for Major Applications and General Support Systems

7. **DESCRIPTION/USE:** To document risk assessment and safeguards for each Federal major application and general support system.

8. **OPR:** AD33 9. **DM:** QD03

10. **DISTRIBUTION:** QD01 (1), AD33 (1), QD03 (1)

11. **INITIAL SUBMISSION:** 45 days after contract award

12. **SUBMISSION FREQUENCY:** Revise as required by MPR 2810.1

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 7.7

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** A security plan shall be prepared for each Federal major application and general support system utilized in the performance of the contract by contractor and subcontractor personnel. Each security plan will be based on an assessment of risks and document the safeguards necessary to ensure sufficient availability, integrity, and confidentiality.

15.2 **APPLICABLE DOCUMENTS:**
MPR 2810.1 *Security of Information Technology*

15.3 **CONTENTS:** Plan contents are defined in MPR 2810.1.

15.4 **FORMAT:** Contractor format is acceptable.

15.5 **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875LS-001**
3. **DATA TYPE:** 1 4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Government Property Management Plan

7. **DESCRIPTION/USE:** To describe the method of controlling and managing Government property.

8. **OPR:** PS10 9. **DM:** QD03

10. **DISTRIBUTION:** QD01 (2), QD03 (2), PS33 (1), and Cognizant property administrator

11. **INITIAL SUBMISSION:** Preliminary three months after Authority To Proceed (ATP)

12. **SUBMISSION FREQUENCY:** Final six months after ATP, revise as required

13. **REMARKS:** This document shall be the official contract requirements document for the control and identification of all Government property.
14. **INTERRELATIONSHIP:** PWS paragraph 2.2

15. **DATA PREPARATION INFORMATION:**
15.1 **SCOPE:** The Government Property Management Plan defines the contractor's methods of care, accounting, and control of Government property.

15.2 **APPLICABLE DOCUMENTS**

FAR	*Federal Acquisition Regulation, Part 45*
NPG 5100.4	*Federal Acquisition Regulation Supplement, (NASA/FAR Supplement) Part 18-45 and latest revisions thereto*

15.3 **CONTENTS:** This plan shall satisfy the requirements of the documents listed in 15.2, and the contract. This plan shall consist of those procedures, which constitute the contractor's property management system and shall include the following categories:

a. Property management.
b. Acquisition.
c. Receiving.
d. Identification.
e. Records.
f. Movement.
g. Storage.
h. Physical inventories.
i. Reports.
j. Consumption.
k. Utilization.
l. Maintenance.
m. Subcontractor control.
n. Disposition.
o. Contract closeout.

15.4 **FORMAT:** Contractor format is acceptable.

15.5 **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic
2. **DRD NO.:** **875MA-001**
3. **DATA TYPE:** 1
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Management Plan
7. **DESCRIPTION/USE:** To provide a description of the contractor's overall management system and organization for accomplishing the requirements set forth in the contract.
8. **OPR:** QD01
9. **DM:** QD01
10. **DISTRIBUTION:** QD01 (3), QD03 (2), PS33 (1)
11. **INITIAL SUBMISSION:** 30 days after Authority to Proceed (ATP)
12. **SUBMISSION FREQUENCY:** Revise as required
13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 2.0
15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The Plan shall be summary in nature with references to the Contractor's internal procedures. The Plan shall describe the contractor's concept, plans, practice, and approach for accomplishing (i.e., managing and controlling) mission services tasks, and management interfaces. It shall describe time-phased relationships of tasks and program elements.

15.2 **APPLICABLE DOCUMENTS:** None

15.3 **CONTENTS:** The Contractor's Plan shall have two sections addressing the following:

a. Provide an overview description of the tasks to be accomplished and a brief outline of methods by which the contractor proposes to manage each of the functional areas.

Functional Areas are:
(1) Systems Safety Engineering
(2) Industrial Safety
(3) Reliability and Maintainability
(4) Quality Assurance
(5) Information Management
(6) Project Assurance
(7) Human Exploration and Development of Space (HEDS) Independent Assurance

b. Provide a description of management concepts and plans necessary to perform the tasks delineated in the PWS. It shall also address the management systems and organizations used in defining and delegating task assignments and the communications channels between the Contractor and the Government. It shall include such management systems as, Project Management, Task Schedules (where applicable), Performance Evaluation/Measurement, Subcontracting, Cost Reduction program, Financial Management, Data Management.

15.4 **FORMAT**: Contractor format is acceptable.

15.5 **MAINTENANCE**: Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875MA-002**
3. **DATA TYPE:** 3 4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Financial Management Report (533M)

7. **DESCRIPTION/USE:** To provide monthly financial reports for monitoring program costs. The 533 reports are the official cost documents used at NASA for cost type, price re-determination, and fixed price incentive contracts.

8. **OPR:** RS40 9. **DM:** QD01

10. **DISTRIBUTION:** QD01 (3), QD03 (2), PS33 (1), RS61 (2)

11. **INITIAL SUBMISSION:** Within 10 days after the close of the first accounting month or no more than 40 days after authority to proceed, whichever is sooner.

12. **SUBMISSION FREQUENCY:** No later than 10 working days following the end of the contractor's accounting month

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 2.0

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The Financial Management Report provides data on accumulated costs and funding projections for management of the contract.

15.2 **APPLICABLE DOCUMENTS**

NFS 1852.242-73	*NASA Contractor Financial Management Reporting*, (July 1997)
NPG 9501.2	*NASA Contractor Financial Management Reporting*

15.3 **CONTENTS:** The elements of cost for financial reporting shall be mutually agreed by the contractor and NASA project office and cover labor hours by function, direct labor cost, materials, subcontracts, interdivisional work, other direct rates, overhead by pool, fringe, G&A, and fee. Changes or additions to elements of cost shall be by mutual agreement between the contractor and the NASA project manager. The data contained in the reports must be auditable using Generally Accepted Accounting Principles. The 533M Report shall include actuals and projections at the total contract level. A summary page at the contract level shall be included reflecting the cumulative since inception cost for the contract. The 533M Report shall also include back-up reporting of the monthly actuals at the individual project/program level.

15.4 **FORMAT:** The NASA Form 533M shall be prepared per NPG 9501.2 and NFS 1852.242-73. Contractor format is acceptable provided all necessary requirements are met. Electronic submission of contractor data is strongly encouraged.

15.5 **MAINTENANCE:** None required.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875MA-003**
3. **DATA TYPE:** 3 4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Progress Reports

7. **DESCRIPTION/USE:** To provide data for the assessment of contract progress. To provide visibility to contractor and MSFC Management of actual and potential problems and progress toward meeting the requirements of the contract.

8. **OPR:** QD01 9. **DM:** QD01

10. **DISTRIBUTION:** QD01 (3), QD03 (2), PS33 (1)

INITIAL SUBMISSION: Quarterly: End of the first quarter. Monthly: Fifteen (15) calendar days following the close of the first reporting period after contract award.

12. **SUBMISSION FREQUENCY:** Quarterly, on or before the fifteenth (15th) calendar day after close of the contractor's accounting month following the end of the quarter reported. Monthly, on or before the fifteenth calendar day after close of the reporting period.

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 2.0

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The Quarterly Reports shall provide a comprehensive status on all active tasks and include the necessary information to assess status and identify problems that need resolution for accomplishment of the contract tasks. The Monthly Reports shall provide tasks and human resources for the contractor and subcontractor efforts.

15.2 **APPLICABLE DOCUMENTS:** None

15.3 **CONTENTS:** The reports shall include:

Quarterly

a. Review of work accomplished, including quantitative description, during the reporting period.
b. Discussion of non-routine tasks for the next reporting period.
c. Indications of any problems, which may impede performance or impact performance, schedule or cost.
d. Man-hours expended in each WBS task for the current months and cumulative months, showing overtime hours separately.
e. Any other information that may assist the technical evaluators in evaluating the technical and administrative program; such as innovative processes, cost-reduction initiatives, etc.

b. Personnel statistical information, numbers by functional assignments, etc.

Monthly

The report shall include for each of the WBS tasks cumulative number of man-hours (by major skill category) expended performing the task during the subject month and a brief, quantitative if possible, summary of the work accomplished during the subject month by WBS.

15.4 **FORMAT:**

Contractor format is acceptable, however, the Quarterly Reports shall be brief in narrative form and the Monthly Reports are preferred in tabular form, addressing, WBS/Skill Category, Hours Worked, and Summary

of Accomplishments.

15.5 **MAINTENANCE**: None required

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic
2. **DRD NO.:** **875MA-004**
3. **DATA TYPE:** 2
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Evaluation and Assessment Reports
7. **DESCRIPTION/USE:** Provide the S&MA Office with the information required to accomplish its mission in support of MSFC Programs and Projects.
8. **OPR:** QD01
9. **DM:** QD01
10. **DISTRIBUTION:** As directed by the COTR
11. **INITIAL SUBMISSION:** As required
12. **SUBMISSION FREQUENCY:** If requested, for each document evaluated and each milestone review.
13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 11.2
15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The reports shall be for various types of reviews for comment, analyses and evaluations required by the Statement of Work

15.2 **APPLICABLE DOCUMENTS**
None.

15.3 **CONTENTS:** The contractor shall provide review comments, analyses and evaluations of various types of documents for the purpose of determining adequacy and compliance with requirements. Such as:

NASA Handbooks, MSFC requirements documents, Level II requirements documents, contractor or Government drawings, specifications, FMEA's, CIL's, Hazard Analyses, Quality Plans and Procedures, Safety Plans, Test Plans and Procedures, Software, ECP/ECR/SCR's, OMI/OMRSD's, and other documents applicable to MSFC Programs and Projects.

The contractor shall detail deficiencies and make recommendations for approval, disapproval, and required changes. The contractor shall also provide trip reports.

15.4 **FORMAT:** Contractor format is acceptable.

15.5 **MAINTENANCE:** None.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875MA-005**
3. **DATA TYPE:** 2 4. **DATE REVISED:**
5. **PAGE:** 1/1

6. **TITLE:** MSFC Safety, Reliability, Maintainability and Quality Assurance (SRM&QA) Documents

7. **DESCRIPTION/USE:** Provide the S&MA Office with the plans, procedures, briefing materials and other documents required in accomplishment of SRM&QA activities.

8. **OPR:** QD01 9. **DM:** QD01

10. **DISTRIBUTION:** As directed by the COTR

11. **INITIAL SUBMISSION:** As required

12. **SUBMISSION FREQUENCY:** As required and requested by the S&MA Office.

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 11.1

15. **DATA PREPARATION INFORMATION:**
15.1 **SCOPE:** These documents shall be various types of MSFC SRM&QA plans, procedures and requirements documents.

15.2 **APPLICABLE DOCUMENTS**
NASA and MSFC Directives and Standards as applicable.

15.3 **CONTENTS:** The contractor shall prepare documents for MSFC S&MA approval and use the various types of plans, procedures, and other documentation for MSFC in-house SRM&QA activities. Examples are quality plans and procedures, verification analyses, safety analyses, FMEA's, CIL's, reliability and maintainability analyses and assessments, and other types of documents detailed in the Statement of Work. The contractor shall also have the capability of preparing charts (viewgraphs) and writing documents such as training plans and SRM&QA management plans. The contractor shall prepare the documents in accordance with NASA or MSFC Directives and standards associated with the preparation of the different documents requested.

15.4 **FORMAT:** The contractor shall use the format established by the directives governing the preparation of the specific documents, otherwise contractor format will be acceptable.

15.5 **MAINTENANCE:** Maintained current by page revision or complete reissue to reflect all approved changes.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875MA-006**
3. **DATA TYPE:** 2 4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Operations Plan, Problem Assessment Center (PAC)

7. **DESCRIPTION/USE:** Update the PAC Operations plan.

8. **OPR:** QD01 9. **DM:** QD01

10. **DISTRIBUTION:** QD01 (4), PS33 (1)

11. **INITIAL SUBMISSION:** Sixty (60) days after contract award.

12. **SUBMISSION FREQUENCY:** Revisions as required.

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 5.5.1

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The plan shall identify the organization, implementation and control of the PAC.

15.2 **APPLICABLE DOCUMENTS**

NSTS 08126, *Space Shuttle Problem Reporting and Corrective Action System Requirements*

SSP 30223, *International Space Station Program Problem Reporting and Corrective Action System Requirements*

15.3 **CONTENTS:**

The PAC Operations Plan shall provide identification of the disciplines, controls and interfaces necessary to implement operation of the PAC, and shall satisfy the requirements of the documents listed in 15.2.

15.4 **FORMAT:** The format of the plan shall permit accommodation of special requirements of new projects via appendices. Generally, the order of tasks shall be in accordance with paragraph 5.5 of the PWS.

15.5 **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue. The Plan shall be reviewed at least once each year to identify necessary changes.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic
2. **DRD NO.:** **875MA-007**
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Quarterly Open Problem List
7. **DESCRIPTION/USE:** Provide MSFC element Project Managers with the status of open problem reports.
8. **OPR:** QD01
9. **DM:** QD01
10. **DISTRIBUTION:** QD01 (4), PS33 (1), and Approximately thirty (30) copies to appropriate MSFC Offices. Distribution to be determined by the COTR.
11. **INITIAL SUBMISSION:** Fifteen (15) calendar days after the end of the first reporting period following the award of the contract.
12. **SUBMISSION FREQUENCY:** Quarterly, fifteen (15) calendar days after the end of the last month of the quarter.
13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 5.5.9d
15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The list shall provide the status of all open problem reports and depict trends relative to problem occurrence rates.

15.2 **APPLICABLE DOCUMENTS :** None

CONTENTS:

a. Summary status charts of open problems shall be prepared for each project. The summaries shall contain, in matrix format, the number of problem reports by activity and criticality category and the numbers of reports open more than six (6) months.

b. A separate chart shall be prepared showing the open problem reports by major elements subsystems for designated projects.

c. A chart showing the total numbers of open problems, by criticality, for all elements combined shall also be prepared.

d. Report trending analysis and results.

15.4 **FORMAT:** Contractor format is acceptable.

15.5 **MAINTENANCE:** None

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875MA-008**
3. **DATA TYPE:** 2 4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Monthly Newly Opened/Closed Problem Summary

7. **DESCRIPTION/USE:** Provide MSFC Project Offices, S&MA and Engineering Directorate with current problem processing status.

8. **OPR:** QD01 9. **DM:** QD01

10. **DISTRIBUTION:** QD01 (4), PS33 (1), and Approximately thirty (30) copies to appropriate MSFC Offices. Distribution to be determined by the COTR.

11. **INITIAL SUBMISSION:** Ten (10) calendar days following the end of the first month of the contract.
12. **SUBMISSION FREQUENCY:** Monthly, ten (10) calendar days following the end of the month .

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 5.5.9e

15. **DATA PREPARATION INFORMATION:**
15.1 **SCOPE:** The report shall list all problems, which were newly opened or closed during the subject month.

15.2 **APPLICABLE DOCUMENTS**
None.

15.3 **CONTENTS:**

a. Provide the following information for each newly opened or closed problem.
   1. MSFC Report Number
   2. Project Name
   3. Contractor
   4. Contractor Report Number
   5. Problem Title
   6. Failure Date
   7. Non-conforming Article Nomenclature
   8. Location of Problem Occurrence
   9. Status
   10. Criticality
      a. Functional
      b. Hardware
   11. Closed Data (For newly closed problems only)

b. Summary status charts of open problems shall be prepared for each project. The summaries shall contain, matrix format, the number of problem reports by activity and criticality category. The number of reports open more than six (6) months shall also be indicated.
c. Provide tabular summaries of open problems (total open and those open over 6 months) by project and by functional criticality within each project.
d. Provide tabular summaries of the numbers of newly opened and newly closed problem reports by project.

15.4 **FORMAT**: Contractor's format is acceptable.

15.5 **MAINTENANCE**: None

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.**: 875 **ISSUE**: Basic 2. **DRD NO.**: **875MA-009**
3. **DATA TYPE**: 1 4. **DATE REVISED**:
5. **PAGE**: 1/2
6. **TITLE**: Personnel Training and Certification Plan

7. **DESCRIPTION/USE**: To provide the contractor and the Government a baseline document for definition of training and personnel certification criteria and procedures to be implemented.

8. **OPR**: QD40 9. **DM**: QD01

10. **DISTRIBUTION**: QD01 (1), QD40 (1), PS33 (1)

11. **INITIAL SUBMISSION**: Ten (10) days after Authority to Proceed (ATP)
12. **SUBMISSION FREQUENCY**: Update as required

13. **REMARKS**:
14. **INTERRELATIONSHIP**: SOW paragraph 2.5

15. **DATA PREPARATION INFORMATION**:
15.1 **SCOPE**: The Personnel Training and Certification Plan provides for training, certification, and re-certification of personnel engaged in hazardous operations and performance of critical processes. The purpose of a training and certification program is to assure that all personnel are capable of performing their duties and work assignments without endangering themselves, fellow employees, equipment and/or facilities.

15.2 **APPLICABLE DOCUMENTS**

MPR 8715.1	*Marshall Safety, Health, and Environmental (SHE) Program*
MPR 3410.1	*Training*
MWI 3410.1	*Personnel Certification Program*
MWI 3410.2	*Personnel Certification for NDE*
QD10-QA-021	*Personnel Certification for Explosives Handling and Inspection*
QD10-QA-022	*Visual Weld Inspection*
ANSI B31.1	*Code for Power Piping*
ANSI B31.3	*Code for Chemical Plant and Refinery Piping*
ANSI/AWS D1.1	*Structural Welding Code/Steel*
ANSI/AWS D1.2	*Structural Welding Code/Aluminum*
NPG 8715.3	*NASA Safety Manual*

15.3 **CONTENTS** : The Personnel Training and Certification Plan shall include criteria which relate to work classification and skills, education, experience, training, and other qualifications necessary to assure safe and efficient operation and maintenance of inspection and test stand systems and high quality workmanship. The plan shall fulfill the requirements of the applicable documents listed in 15.2 and include:

A. Training and certification program.
   1. General
      a. Program description.
      b. Program administration.
      c. Certification duration.
      d. Definitions.

15. **DATA PREPARATION INFORMATION (CONTINUED):**

e. Job description summaries.
f. Task assignments per job description.
g. Skills required per job description.

2. Certification requirements/skills.
   a. Education.
   b. Experience/work history.
   c. Specialized training.
   d. Physical condition/attitude.
3. Certification process.
   a. Supervision responsibilities.
   b. Certifying authority.
   c. Formal/informal examination.
   d. Proficiency demonstration.
4. Certification documentation.

B. Specific skills requiring training and proficiency shall include:
1. Schematic and drawing comprehension.
2. Test and launch operations.

C. Specific skills requiring certification and proficiency shall include:
1. Solid propellant inspection *.
2. Confined space *.
3. Welding inspection and nondestructive evaluation (NDE).
4. Program Critical Hardware (PCH) *.
5. Lifting Equipment Training Certified Examiner.
6. Propellant and Explosive Handler *.
7. Risk Management Course Instructors (NASA Headquarters provided training, travel required).

* Training provided by the Government at MSFC.

15.4 **FORMAT** : Contractor format is acceptable.
15.5 **MAINTENANCE** : Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875SA-001**
3. **DATA TYPE:** 2 4. **DATE REVISED:**
5. **PAGE:** 1/3
6. **TITLE:** On-site Safety and Health Plan

7. **DESCRIPTION/USE:** To provide the contractor and the Government a baseline document for planning, management, control, and implementation of the contractor's industrial/occupational safety, health, and environmental program.

8. **OPR:** AD02/QD50/AD10 9. **DM:** QD01

10. **DISTRIBUTION:** QD01 (2), QD50 (3), PS33 (1)

11. **INITIAL SUBMISSION:** Preliminary with proposal

12. **SUBMISSION FREQUENCY:** Ten days after Authority to Proceed (ATP); update as required

13. **REMARKS:**
14. **INTERRELATIONSHIP:** NFS 1852.223-70, *Safety and Health*; FAR 52.223-1, *Clean Air and Water Certification*; FAR 52.223-2, *Clean Air and Water*; FAR 52.223-3, *Hazardous Material Identification and Material Safety Data*; FAR 52.223-4, *Recovered Material Certification*; FAR 52.223-5, *Pollution Prevention and Right-to-Know Information*; FAR 52.223-9, *Certification and Estimate of Percentage of Recovered Material Content for EPA Designated Items*; FAR 52.223-10, *Waste Reduction Program*; FAR 52.223-11, *Ozone Depleting Substances*; FAR 52.223-12, *Refrigeration Equipment and Air Conditioners*; FAR 52.223-13, *Certification of Toxic Chemical Release Reporting*; and FAR 52.223-14, *Toxic Chemical Release Reporting*; PWS paragraph 2.3

15. **DATA PREPARATION INFORMATION:**
15.1 **SCOPE:** The On-site Safety and Health Plan describes the contractor's method of implementing occupational safety, health, and environmental standards over the duration of the contract.

15.2 **APPLICABLE DOCUMENTS:** Implementation of the following Occupational Safety and Health Standards and applicable requirements shall be specified in the plan.

29 CFR 1910	*Department of Labor; Occupational Safety and Health Administration Standards for General Industry*
29 CFR 1926	*Department of Labor; Occupational Safety and Health Administration Standards for Construction Industry* (if applicable to scope of this contract)
40 CFR	*Protection of the Environment*

ANSI Standards applicable to the scope of this contract
ASME Boiler and Pressure Vessel Code

MPR 8500.1	MSFC Environmental Management Program
MPD 1040.3	*MSFC Emergency Plan*
MPR 1840.3	*MSFC Hazardous Chemicals in Laboratories Protection Program*
MPR 1840.1	*MSFC Confined Space Entries*
MPD 1860.2	*Radiation Safety Program*
MPR 1810.1	*MSFC Occupational Medicine*
MPD 1840.3	*MSFC Respiratory Protection Program*

MPD 1840.2	*MSFC Hearing Conservation Program*
MPD 1840.1	*MSFC Environmental Health Program*
MPR 1840.2	*MSFC Hazard Communication Program*
MPD 1860.1	*Laser Safety*
MPR 1800.1	*Blood Borne Pathogens*

15. **DATA PREPARATION INFORMATION (CONTINUED):**

MPR 8715.1	*MSFC Safety, Health, and Environmental (SHE) Program*
MPD 8900.1	*Medical Operations Responsibilities for Human Space Flight Programs* (NOTE: This document only applies to Space Station contracts)
NFPA Standards	*National Electrical Code* and *National Fire Code*
NPG 8715.1	*NASA Safety and Health Handbook Occupational Safety and Health Program*
NPG 8715.3	*NASA Safety Manual*
NSS 1740.11	*Safety Standard for Fire Protection* (to be updated to NASA-STD-8719.11)

15.3 **CONTENTS**: The plan shall describe the manner in which the contractor shall implement the intent of the requirements of the applicable documents as they pertain to the specific statement of work tasks to be performed. The plan shall define the safety, health, and environmental program, objectives and goals, management structure, and detailed description of the total safety program including responsibilities, procedures, reporting, training, compliance methodologies, and interface and coordination activities. The On-site Safety and Health Plan shall include:

a. Statement of management policy, commitment, and accountability to provide for the safety and health of personnel (i.e., employees, customers, and public) and property and compliance with EPA, OSHA and NASA requirements.
b. Provision for top-level management monthly safety committee meetings.
c. Descriptions of safety awareness and motivation programs, including documented safety meeting requirements, and documented safety awareness training for employees. (Note: each supervisor shall conduct, at a minimum, one safety meeting per month.)
d. Methods of hazard identification and control, e.g., hazard analysis and risk assessment. (Note: Job Hazard Analysis (JHA) shall be performed for all tasks.)
e. Methods to include clear statements of hazardous situations and necessary cautions in appropriate detail plans, procedures, and other working documents.
f. Means for training each employee to recognize hazards and avoid accidents, and assuring each employee has a clear understanding of the disciplinary program.
g. Provisions for training and certification of personnel performing potentially hazardous operations. Job categories under the contracted effort that require certification shall be identified.
h. Descriptions of OSHA programs that require documented plans (e.g., Personnel Protective Equipment (PPE), Confined Space, and Lockout/Tagout, etc. Include the interrelationships with the MSFC plans.) (Note: only programs applicable to the contract need to be addressed.)
i. Controls over the procurement, storage, issuance, and use of hazardous substances and procedures for recycling and disposal of hazardous waste.
j. Method of ensuring a documented emergency management program. Include a list of emergency points of contract. (Note: on-site contractors may use MPD 1040.3.)
k. Method of reporting and investigating all mishaps and close calls, including an outline of reporting requirements and a description of

how root cause analysis is to be accomplished.

l. Provisions for safety and health services such as hazardous waste disposal, industrial hygiene monitoring, emergency medical support, hearing conservation program, and hazard communication.

m. Requirements for formal safety inspections and correction of deficiencies.

n. Requirements for documented safety visits. (Note: each supervisor shall conduct, at a minimum, one safety visit per month.)

15. **DATA PREPARATION INFORMATION (CONTINUED):**

o. Means of program evaluation, identifying duties, methods and frequency for internal evaluation of the safety and health program, and identification of personnel who perform evaluations and to whom evaluations are reported and who approves corrective action. (Note: program evaluation shall be conducted, at a minimum, once per year.)

p. Schedules of the frequency and documentation requirements for inspections, plan and procedure reviews, and certifications.

q. Provision for suspending work where safety or environmental conditions warrant such action.

r. Flowdown of safety responsibilities between appropriate tiers (i.e., subcontractors).

s. Identification of employees (by type, classification, and qualification) responsible for the implementation of the above elements.

t. Provisions for compliance with environmental laws and regulations by: reporting hazardous and toxic substance use; implementing green procurements; reducing, reusing, and recycling of hazardous and toxic substances prior to disposal; minimizing storm water pollution; ensuring equipment and processes permitted by applicable laws; and disposing of solid and liquid materials as permitted by applicable laws.

15.4 **FORMAT**: Contractor format is acceptable.

15.5 **MAINTENANCE**: Changes shall be incorporated by change page or complete reissue.

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 875 **ISSUE:** Basic 2. **DRD NO.:** **875SA-002**
3. **DATA TYPE:** 1 4. **DATE REVISED:**
5. **PAGE:** 1/2
6. **TITLE:** Mishap and Safety Statistics Reports

7. **DESCRIPTION/USE:** To provide reporting of mishaps and related information required to produce metrics for MSFC.

8. **OPR:** QD50 9. **DM:** QD01

10. **DISTRIBUTION:** As required

11. **INITIAL SUBMISSION:**
    a. Type A or B mishaps: Initial notification shall be by telephone immediately. MSFC Form 4370 shall be submitted within 4 hours of knowledge of all mishaps that have the potential for: lost-time, damage exceeding $25,000, impacting critical project/program schedule, or gaining public attention in accordance with MWI 8621.1.
    b. Type C, Incident, and Close Call mishaps: Initial notification shall be by MSFC Form 4370 within 4 hours of knowledge.
    c. A follow-up mishap report shall be submitted using NASA Form 1627 within 10 days of mishap in accordance with MWI 8621.1.
    d. MSFC Form 4371 listing the baseline information (e.g., contract number, subcontractors, SIC codes, number of employees, number of supervisors, etc.) shall be submitted by the 10th of each month following contract award.
    e. Mishap Board Report: After completion of Type A or B mishap investigation.

12. **SUBMISSION FREQUENCY:**
    a. MSFC Form 4370 - Each occurrence of a mishap.
    b. NASA Form 1627 - Each occurrence of a mishap. Corrective action status reports are due every 30 days until the final report is submitted.
    c. MSFC Form 4371 - By the 10th of each month.
    d. Mishap Board Report - Each occurrence of a Type A or B mishap.

13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 2.3

15. **DATA PREPARATION INFORMATION:**

15.1 **SCOPE:** The Mishap and Safety Statistics Reports document all mishaps and close calls as required in NPG 8621.1

15.2 **APPLICABLE DOCUMENTS**

NPG 8621.1 *NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Record keeping,*

MWI 8621.1 *Close Call and Mishap Reporting and Investigation Program*

15.3 **CONTENTS:** The reports shall contain the information required by MWI 8621.1. The contractor shall use the forms listed in 15.4 to report mishaps and related information required to produce the safety metrics.

DRD Continuation Sheet

TITLE: Mishap and Safety Statistics Reports **DRD NO.:** 875SA-002

DATA TYPE: 1 **PAGE:** 2/2

15. **DATA PREPARATION INFORMATION (CONTINUED):**

15.4 **FORMAT:** The following formats shall be submitted:

a. MSFC Form 4370, "MSFC Flash Mishap Report."
b. NASA Form 1627, "NASA Mishap Report."
c. MSFC Form 4371, "MSFC Contractor Safety Statistics."
d. Mishap Board Report using the format provided in NPG 8621.1

MAINTENANCE: Changes shall be incorporated by change page or complete reissue.

ATTACHMENT J-3

WAGE DETERMINATION

REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT **By direction of the Secretary of Labor**	**U.S. DEPARTMENT OF LABOR** **EMPLOYMENT STANDARDS ADMINISTRATION** **WAGE AND HOUR DIVISION** **WASHINGTON D.C. 20210**
ORIGINAL SIGNED BY: **William W.Gross Division of** **Director Wage Determinations**	**Wage Determination No.: 1994-2008** **Revision No.: 23** **Date Of Last Revision: 05/23/2005**

States: Alabama, Tennessee

Area: Alabama Counties of Colbert, Franklin, Jackson, Lauderdale, Lawrence, Limestone, **Madison**, Marion, Marshall, Morgan, Winston
Tennessee Counties of Giles, Lawrence, Lincoln, Moore, Wayne

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support and Clerical Occupations	
01011 - Accounting Clerk I	10.60
01012 - Accounting Clerk II	12.77
01013 - Accounting Clerk III	14.62
01014 - Accounting Clerk IV	16.77
01030 - Court Reporter	17.16
01050 - Dispatcher, Motor Vehicle	15.10
01060 - Document Preparation Clerk	12.47
01070 - Messenger (Courier)	8.14
01090 - Duplicating Machine Operator	12.47
01110 - Film/Tape Librarian	10.72
01115 - General Clerk I	9.11
01116 - General Clerk II	10.25
01117 - General Clerk III	11.18
01118 - General Clerk IV	13.15
01120 - Housing Referral Assistant	17.51
01131 - Key Entry Operator I	10.29
01132 - Key Entry Operator II	12.26
01191 - Order Clerk I	10.22
01192 - Order Clerk II	13.88
01261 - Personnel Assistant (Employment) I	10.10
01262 - Personnel Assistant (Employment) II	13.31
01263 - Personnel Assistant (Employment) III	14.87
01264 - Personnel Assistant (Employment) IV	16.10
01270 - Production Control Clerk	16.82
01290 - Rental Clerk	10.72
01300 - Scheduler, Maintenance	15.32
01311 - Secretary I	15.32
01312 - Secretary II	17.16
01313 - Secretary III	19.14
01314 - Secretary IV	21.27
01315 - Secretary V	23.54
01320 - Service Order Dispatcher	12.80
01341 - Stenographer I	13.51
01342 - Stenographer II	15.32
01400 - Supply Technician	21.27
01420 - Survey Worker (Interviewer)	16.43
01460 - Switchboard Operator-Receptionist	10.37
01510 - Test Examiner	17.16
01520 - Test Proctor	17.16
01531 - Travel Clerk I	9.37

01532 - Travel Clerk II	9.92
01533 - Travel Clerk III	10.58
01611 - Word Processor I	12.27
01612 - Word Processor II	13.77
01613 - Word Processor III	15.39

03000 - Automatic Data Processing Occupations

03010 - Computer Data Librarian	13.06
03041 - Computer Operator I	13.22
03042 - Computer Operator II	17.17
03043 - Computer Operator III	18.39
03044 - Computer Operator IV	23.48
03045 - Computer Operator V	26.39
03071 - Computer Programmer I (1)	19.93
03072 - Computer Programmer II (1)	23.89
03073 - Computer Programmer III (1)	27.62
03074 - Computer Programmer IV (1)	27.62
03101 - Computer Systems Analyst I (1)	27.62
03102 - Computer Systems Analyst II (1)	27.62
03103 - Computer Systems Analyst III (1)	27.62
03160 - Peripheral Equipment Operator	13.22

05000 - Automotive Service Occupations

05005 - Automotive Body Repairer, Fiberglass	17.50
05010 - Automotive Glass Installer	15.94
05040 - Automotive Worker	15.94
05070 - Electrician, Automotive	16.73
05100 - Mobile Equipment Servicer	14.45
05130 - Motor Equipment Metal Mechanic	17.50
05160 - Motor Equipment Metal Worker	15.94
05190 - Motor Vehicle Mechanic	15.98
05220 - Motor Vehicle Mechanic Helper	12.52
05250 - Motor Vehicle Upholstery Worker	15.22
05280 - Motor Vehicle Wrecker	15.94
05310 - Painter, Automotive	15.28
05340 - Radiator Repair Specialist	15.94
05370 - Tire Repairer	12.75
05400 - Transmission Repair Specialist	17.50

07000 - Food Preparation and Service Occupations

(not set) - Food Service Worker	8.09
07010 - Baker	10.84
07041 - Cook I	9.14
07042 - Cook II	10.27
07070 - Dishwasher	7.57
07130 - Meat Cutter	12.41
07250 - Waiter/Waitress	6.82

09000 - Furniture Maintenance and Repair Occupations

09010 - Electrostatic Spray Painter	17.56
09040 - Furniture Handler	13.94
09070 - Furniture Refinisher	17.56
09100 - Furniture Refinisher Helper	14.41
09110 - Furniture Repairer, Minor	15.98
09130 - Upholsterer	17.56

ATTACHMENT J-3

WAGE DETERMINATION (CONT)

11030 - General Services and Support Occupations

11030 - Cleaner, Vehicles	8.16
11060 - Elevator Operator	8.06
11090 - Gardener	12.11
11121 - House Keeping Aid I	7.13
11122 - House Keeping Aid II	8.62
11150 - Janitor	8.06
11210 - Laborer, Grounds Maintenance	10.00
11240 - Maid or Houseman	6.63
11270 - Pest Controller	12.10
11300 - Refuse Collector	10.21
11330 - Tractor Operator	12.08
11360 - Window Cleaner	8.24

12000 - Health Occupations

12020 - Dental Assistant	13.87
12040 - Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	14.33
12071 - Licensed Practical Nurse I	12.46
12072 - Licensed Practical Nurse II	14.00
12073 - Licensed Practical Nurse III	15.68
12100 - Medical Assistant	9.81
12130 - Medical Laboratory Technician	13.21
12160 - Medical Record Clerk	11.28
12190 - Medical Record Technician	13.60
12221 - Nursing Assistant I	8.09
12222 - Nursing Assistant II	9.09
12223 - Nursing Assistant III	9.92
12224 - Nursing Assistant IV	11.13
12250 - Pharmacy Technician	12.24
12280 - Phlebotomist	11.89
12311 - Registered Nurse I	19.83
12312 - Registered Nurse II	24.27
12313 - Registered Nurse II, Specialist	24.27
12314 - Registered Nurse III	29.36
12315 - Registered Nurse III, Anesthetist	29.36
12316 - Registered Nurse IV	35.18

13000 - Information and Arts Occupations

13002 - Audiovisual Librarian	21.15
13011 - Exhibits Specialist I	17.77
13012 - Exhibits Specialist II	21.76
13013 - Exhibits Specialist III	26.45
13041 - Illustrator I	17.77
13042 - Illustrator II	21.76
13043 - Illustrator III	26.45
13047 - Librarian	20.75
13050 - Library Technician	14.67
13071 - Photographer I	13.58
13072 - Photographer II	15.68
13073 - Photographer III	18.78
13074 - Photographer IV	22.96
13075 - Photographer V	27.87

15000 - Laundry, Dry Cleaning, Pressing and Related Occupations

15010 - Assembler	7.13
15030 - Counter Attendant	7.13
15040 - Dry Cleaner	8.95
15070 - Finisher, Flatwork, Machine	7.13
15090 - Presser, Hand	7.13
15100 - Presser, Machine, Drycleaning	7.13
15130 - Presser, Machine, Shirts	7.13
15160 - Presser, Machine, Wearing Apparel, Laundry	7.51
15190 - Sewing Machine Operator	9.46
15220 - Tailor	9.89
15250 - Washer, Machine	7.73

19000 - Machine Tool Operation and Repair Occupations

19010 - Machine-Tool Operator (Toolroom)	19.44
19040 - Tool and Die Maker	23.71

21000 - Material Handling and Packing Occupations

21010 - Fuel Distribution System Operator	16.80
21020 - Material Coordinator	16.82
21030 - Material Expediter	16.82
21040 - Material Handling Laborer	10.29
21050 - Order Filler	10.87
21071 - Forklift Operator	14.82
21080 - Production Line Worker (Food Processing)	12.73
21100 - Shipping/Receiving Clerk	12.72
21130 - Shipping Packer	12.72
21140 - Store Worker I	10.15
21150 - Stock Clerk (Shelf Stocker; Store Worker II)	13.77
21210 - Tools and Parts Attendant	14.82
21400 - Warehouse Specialist	14.00

23000 - Mechanics and Maintenance and Repair Occupations

23010 - Aircraft Mechanic	22.24
23040 - Aircraft Mechanic Helper	17.44
23050 - Aircraft Quality Control Inspector	24.45
23060 - Aircraft Servicer	19.34
23070 - Aircraft Worker	20.27
23100 - Appliance Mechanic	18.04
23120 - Bicycle Repairer	14.66
23125 - Cable Splicer	19.76
23130 - Carpenter, Maintenance	17.56
23140 - Carpet Layer	17.29
23160 - Electrician, Maintenance	22.67
23181 - Electronics Technician, Maintenance I	16.30
23182 - Electronics Technician, Maintenance II	25.55
23183 - Electronics Technician, Maintenance III	26.62
23260 - Fabric Worker	16.54
23290 - Fire Alarm System Mechanic	18.79
23310 - Fire Extinguisher Repairer	15.72
23340 - Fuel Distribution System Mechanic	18.79
23370 - General Maintenance Worker	16.43
23400 - Heating, Refrigeration and Air Conditioning Mechanic	18.38
23430 - Heavy Equipment Mechanic	18.38
23440 - Heavy Equipment Operator	17.87
23460 - Instrument Mechanic	18.79
23470 - Laborer	10.30
23500 - Locksmith	18.04

23530 - Machinery Maintenance Mechanic	23.32
23550 - Machinist, Maintenance	16.92
23580 - Maintenance Trades Helper	14.41
23640 - Millwright	18.79
23700 - Office Appliance Repairer	18.04
23740 - Painter, Aircraft	17.56
23760 - Painter, Maintenance	17.56
23790 - Pipefitter, Maintenance	18.59
23800 - Plumber, Maintenance	17.76
23820 - Pneudraulic Systems Mechanic	18.79
23850 - Rigger	18.79
23870 - Scale Mechanic	17.29
23890 - Sheet-Metal Worker, Maintenance	18.38
23910 - Small Engine Mechanic	16.75
23930 - Telecommunication Mechanic I	18.38
23931 - Telecommunication Mechanic II	20.21
23950 - Telephone Lineman	18.38
23960 - Welder, Combination, Maintenance	18.38
23965 - Well Driller	18.79
23970 - Woodcraft Worker	18.79
23980 - Woodworker	16.43
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	7.07
24580 - Child Care Center Clerk	8.83
24600 - Chore Aid	6.95
24630 - Homemaker	11.20
25000 - Plant and System Operation Occupations	
25010 - Boiler Tender	18.86
25040 - Sewage Plant Operator	17.87
25070 - Stationary Engineer	18.86
25190 - Ventilation Equipment Tender	14.85
25210 - Water Treatment Plant Operator	17.56
27000 - Protective Service Occupations	
(not set) - Police Officer	16.91
27004 - Alarm Monitor	11.83
27006 - Corrections Officer	14.08
27010 - Court Security Officer	14.49
27040 - Detention Officer	14.08
27070 - Firefighter	11.64
27101 - Guard I	9.95
27102 - Guard II	12.55
28000 - Stevedoring/Longshoremen Occupations	
28010 - Blocker and Bracer	15.78
28020 - Hatch Tender	15.78
28030 - Line Handler	15.78
28040 - Stevedore I	12.83
28050 - Stevedore II	15.54
29000 - Technical Occupations	
21150 - Graphic Artist	19.60
29010 - Air Traffic Control Specialist, Center (2)	31.69
29011 - Air Traffic Control Specialist, Station (2)	21.85
29012 - Air Traffic Control Specialist, Terminal (2)	24.07

29023 - Archeological Technician I	15.69
29024 - Archeological Technician II	17.56
29025 - Archeological Technician III	21.76
29030 - Cartographic Technician	22.32
29035 - Computer Based Training (CBT) Specialist/ Instructor	30.38
29040 - Civil Engineering Technician	20.75
29061 - Drafter I	13.99
29062 - Drafter II	15.69
29063 - Drafter III	17.77
29064 - Drafter IV	21.76
29081 - Engineering Technician I	12.79
29082 - Engineering Technician II	15.89
29083 - Engineering Technician III	19.09
29084 - Engineering Technician IV	26.34
29085 - Engineering Technician V	30.74
29086 - Engineering Technician VI	37.17
29090 - Environmental Technician	20.17
29100 - Flight Simulator/Instructor (Pilot)	30.38
29160 - Instructor	20.67
29210 - Laboratory Technician	16.70
29240 - Mathematical Technician	23.77
29361 - Paralegal/Legal Assistant I	14.55
29362 - Paralegal/Legal Assistant II	18.40
29363 - Paralegal/Legal Assistant III	22.45
29364 - Paralegal/Legal Assistant IV	27.17
29390 - Photooptics Technician	22.75
29480 - Technical Writer	23.07
29491 - Unexploded Ordnance (UXO) Technician I	20.14
29492 - Unexploded Ordnance (UXO) Technician II	24.37
29493 - Unexploded Ordnance (UXO) Technician III	29.21
29494 - Unexploded (UXO) Safety Escort	20.14
29495 - Unexploded (UXO) Sweep Personnel	20.14
29620 - Weather Observer, Senior (3)	18.79
29621 - Weather Observer, Combined Upper Air and Surface Programs (3)	18.39
29622 - Weather Observer, Upper Air (3)	18.39

31000 - Transportation/ Mobile Equipment Operation Occupations

31030 - Bus Driver	12.67
31260 - Parking and Lot Attendant	8.86
31290 - Shuttle Bus Driver	11.97
31300 - Taxi Driver	9.91
31361 - Truckdriver, Light Truck	12.67
31362 - Truckdriver, Medium Truck	15.61
31363 - Truckdriver, Heavy Truck	16.26
31364 - Truckdriver, Tractor-Trailer	16.26

99000 - Miscellaneous Occupations

99020 - Animal Caretaker	7.48
99030 - Cashier	8.30
99041 - Carnival Equipment Operator	8.93
99042 - Carnival Equipment Repairer	9.38
99043 - Carnival Worker	7.40
99050 - Desk Clerk	6.90
99095 - Embalmer	20.14
99300 - Lifeguard	10.58
99310 - Mortician	20.14
99350 - Park Attendant (Aide)	13.29
99400 - Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	10.58
99500 - Recreation Specialist	11.14
99510 - Recycling Worker	12.22
99610 - Sales Clerk	10.08

99620	- School Crossing Guard (Crosswalk Attendant)	9.47
99630	- Sport Official	10.58
99658	- Survey Party Chief (Chief of Party)	13.77
99659	- Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	11.61
99660	- Surveying Aide	8.48
99690	- Swimming Pool Operator	12.94
99720	- Vending Machine Attendant	11.29
99730	- Vending Machine Repairer	12.94
99740	- Vending Machine Repairer Helper	11.29

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of $2.87 per hour computed on the basis of all hours worked by service employees employed on the contract.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years, and 4 after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** HAZARDOUS PAY DIFFERENTIAL ****

An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive

ordnance, explosives and incendiary materials. All operations involving regarding and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance material other than small arms ammunition.

NOTE: These differentials are only applicable to work that has been specifically designated by the agency for ordnance, explosives, and incendiary material differential pay.

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of $3.35 per week (or $.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Under the policy and guidance contained in All Agency Memorandum No. 159, the Wage and Hour Division does not recognize, for section 4(c) purposes, prospective wage rates

wage determination in the contract, adjusting the contract price, etc." (The relevant CBA section) in the collective bargaining agreement between (the parties) contains contingency language that Wage and Hour does not recognize as reflecting "arm's length negotiation" under section 4(c) of the Act and 29 C.F.R. 5.11(a) of the regulations. This wage determination therefore reflects the actual CBA wage rates and fringe benefits paid under the predecessor contract.

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).

2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

CONTRACT FEE EVALUATION PLAN (FEP)

MSFC SAFETY AND MISSION ASSURANCE (S&MA) MISSION SERVICES

CONTRACT NAS8-00179

CONTRACT FEE EVALUATION PLAN (FEP)

1. General

Attachment J-4 of the Contract provides the amount of potential award fee applicable to each contract period and the guidance on administration of the potential award fee pool. A Performance Evaluation Plan (PEP) will be utilized to evaluate the contractor's efforts.

2. Performance Evaluation Plan (PEP)

Under the PEP, Technical Performance and Management Performance and Cost against Contract Value will be the evaluation criteria for assessing the contractor's performance. This Attachment is subject to change during the course of this contract and the contractor is advised that the Government reserves the right to make necessary changes unilaterally to ensure excellence in S&MA mission services. The contractor will be advised of any changes prior to the evaluation period in which the changes become necessary.

ATTACHMENT J-4

PERFORMANCE EVALUATION PLAN (PEP)

MSFC SAFETY AND MISSION ASSURANCE (S&MA) MISSION SERVICES

CONTRACT NAS8-00179

THE PERFORMANCE EVALUATION PLAN (PEP) PORTION OF THE CONTRACT FEE EVALUATION PLAN IS INCORPORATED HEREIN BY REFERENCE.

Period	Negotiated Composite Direct Labor Rate (CDLR)
(b)(4)	

A performance-based metric will be used to score the contractor's achievement of cost performance criteria. The metric will be the composite actual fully burdened labor rate, in comparison to the composite fully burdened negotiated labor rate for the contract period.

SUCCESSFUL PERFORMANCE (Cost Criterion): Successful performance of the cost performance criterion is defined by the effective management of the actual incurred, fully burdened, direct labor cost in comparison to the negotiated, fully burdened, direct labor rate. If, during the evaluation period, the contractor's cost performance results in an actual incurred rate that is 95 percent or less in comparison to the fully burdened direct labor negotiated for the contract, the contractor will be entitled to the full 30 percent of the fee potential for this cost performance criterion. The maximum allowable defect rate (MADR) for the cost performance criterion is an actual incurred rate that is .95 when compared to the negotiated direct labor cost rate. If the contractor fails to control the actual incurred direct labor cost rate and it exceeds the negotiated direct labor cost rate, the full 30 percent fee potential for this criterion will be forfeited.

The table below relates cost performance to the potential fee deductions that will apply above the MADR of 0.95:

Actual Incurred Rate (AIR) Divided By Negotiated Rate for the Period	Deduction in Potential Cost Performance Fee
< 0.95	0%
If ≥ 0.95 but < 0.96	10%
If ≥ 0.96 but < 0.97	20%
If ≥ 0.97 but < 0.98	30%
If ≥ 0.98 but < 0.99	40%
If ≥ 0.99 but ≤ 1.0	50%
> 1.0	100%

Annual determinations against the cost performance criterion will occur at completion of the base period and, as applicable, each option period of the contract (i.e. periods 2, 4, 6, 8, and 10).

ATTACHMENT J-5

MAKE OR BUY PLAN

Item or Services	Provide	Subcontract	Subcontractor (Source/Address)

A Make or Buy Plan was not proposed

Note: See NASA FAR clause 1852.215-78

ATTACHMENT J-6

INSTALLATION-PROVIDED PROPERTY AND SERVICES

All contract employees shall be located on-site at MSFC with the exception of the personnel located at Stennis. The Government shall provide the following property and services in support of this contract effort.

I. Government Provided Equipment

The Items listed below are a representative list of equipment and services to be made available to the contractor for use in the performance of this contract.

Equipment	Quantity
Local Area Pagers	30
Cellular Telephones	2
Fax Machines	3
Lap Top Computers	45
Printers	18
Special Display Units	3
Desk Top Computers	114
Disk Drive Units	3
Sheet Feeder	1
Scanners	3
Uninterrupted Power Supply Units	3
Personal Data Assistant	3

II. General Property and Services to be Provided Onsite at MSFC

The Government shall be responsible for furnishing the following onsite equipment and services:

1. Reproduction Services
2. Janitorial Services
3. Onsite Taxi Service
4. Technical Work Rooms
5. Conference Rooms
6. Storage Space

Period	Negotiated Composite Direct Labor Rate (CDLR)
(b)(4)	

A performance-based metric will be used to score the contractor's achievement of cost performance criteria. The metric will be the composite actual fully burdened labor rate, in comparison to the composite fully burdened negotiated labor rate for the contract period.

SUCCESSFUL PERFORMANCE (Cost Criterion): Successful performance of the cost performance criterion is defined by the effective management of the actual incurred, fully burdened, direct labor cost in comparison to the negotiated, fully burdened, direct labor rate. If, during the evaluation period, the contractor's cost performance results in an actual incurred rate that is 95 percent or less in comparison to the fully burdened direct labor negotiated for the contract, the contractor will be entitled to the full 30 percent of the fee potential for this cost performance criterion. The maximum allowable defect rate (MADR) for the cost performance criterion is an actual incurred rate that is .95 when compared to the negotiated direct labor cost rate. If the contractor fails to control the actual incurred direct labor cost rate and it exceeds the negotiated direct labor cost rate, the full 30 percent fee potential for this criterion will be forfeited.

The table below relates cost performance to the potential fee deductions that will apply above the MADR of 0.95:

Actual Incurred Rate (AIR) Divided By Negotiated Rate for the Period	Deduction in Potential Cost Performance Fee
< 0.95	0%
If ≥ 0.95 but < 0.96	10%
If ≥ 0.96 but < 0.97	20%
If ≥ 0.97 but < 0.98	30%
If ≥ 0.98 but < 0.99	40%
If ≥ 0.99 but ≤ 1.0	50%
> 1.0	100%

Annual determinations against the cost performance criterion will occur at completion of the base period and, as applicable, each option period of the contract (i.e. periods 2, 4, 6, 8, and 10).